

10. Synopsis of the *Cracidæ*. By P. L. SCLATER, M.A., Ph.D., F.R.S., and OSBERT SALVIN, M.A., F.L.S., &c.

ABSTRACT OF CONTENTS.

Sect. I. Introductory remarks	p. 504.
„ II. History of the group	p. 505.
„ III. Synopsis of the species	p. 512.
„ IV. Geographical distribution.....	p. 541.

Sect. I. *Introductory Remarks.*

In his article on the classification and distribution of the *Alectoromorphæ*, published in this Society's 'Proceedings' for 1868, Professor Huxley has clearly pointed out the characters which divide the Gallinaceous birds into two divisions, the *Peristeropodes* and the *Alectoropodes*. "In the former division the foot is pigeon-like, the long hallux being on a level with the other toes; while in the latter it is fowl-like, the hallux being short and raised." This difference in the structure of the feet is accompanied by well-marked osteological characters, particularly in the form of the sternum, which Professor Huxley then proceeds to speak of.

The *Peristeropodous* Gallinæ embrace only two families, the *Cracidæ* and *Megapodidæ*—the former peculiar to the tropics of the New World, the latter characteristic of the Australian region of the Old World, whence it extends into the adjacent districts of the Indian region.

Professor Huxley states that he is unable to discover "any important osteological differences whatever" between these two families; and there can be no doubt that as regards the structure of their osseous skeleton they are very intimately allied. But they are exceedingly different in other respects, particularly in their nesting-habits and general mode of life. While the *Megapodidæ* spend their existence on the ground, and lay their numerous eggs in vast mounds raised for the purpose, leaving them to be hatched out by solar heat, or by that arising from the decay of vegetable matter, the *Cracidæ* are essentially arboreal, only occasionally descending to the earth beneath the dense forests in which they dwell. The latter also are true nest-makers, build these structures upon the branches of trees, lay but few eggs, and perform the duties of incubation like orthodox birds.

In continuation of former papers of the same sort upon the birds of the New World, we have now to offer to the Society a revision of the species contained in the last-named family. This has been founded mainly upon the following collections:—(1) the collection of Messrs. Salvin and Godman; (2) that of the British Museum; (3) that of the Smithsonian Institution, which has been most liberally sent over to us from Washington for this purpose; (4 and 5) those of the Museums of Paris and Berlin, which have been examined by Sclater during recent visits to those cities; and (6) the living collection in the Society's gardens, which embraces twenty-six specimens, belonging to sixteen species. We have likewise

received great assistance, in answers to numerous inquiries and in loan of specimens, from Herr v. Pelzeln, of the Imperial Cabinet of Vienna, from Mr. G. N. Lawrence, of New York, and from Mr. Moore, Curator of the Derby Museum, Liverpool.

Before commencing our synopsis of the species of *Cracidæ* we will say a little concerning the labours of former workers on this group, from the days of Linnæus.

Sect. II. *Brief Chronological Account of the Writings of the Principal Authorities on the Cracidæ.*

(1766.) Linnæus, in the twelfth edition of the 'Systema Naturæ,' establishes the genus *Crax* with five species. Of these, *C. rubra* is the female of *C. globicera*, leaving four valid Linnæan species of this genus. The only Penelopine bird recognized is placed in the genus *Phasianus*. It is *P. motmot*, Linn. (= *Ortalia motmot*).

(1780, about.) In the 'Planches Enluminées,' published about this date, four species of *Cracidæ* are figured, viz. :—

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| Pl. 86. <i>Le Hocco : faisán de la Guianne</i> | (= <i>Crax daubentoni</i>). |
| 125. <i>Hocco du Pérou</i> | (= <i>C. globicera</i> ♀). |
| 78. <i>Faisán, le Pierre de Cayenne</i> | (= <i>Pauxi galeata</i>). |
| 338. <i>Faisán verdâtre de Cayenne</i> | (= <i>Penelope marail</i>). |

(1783.) Boddaert, in his 'Table des Planches Enluminées,' gives the name *Phasianus katraka* to Pl. Enl. 146 (which is *Ortalia motmot*).

(1784.) Jacquin, in his 'Beyträge zur Geschichte der Vögel,' figures two species of *Penelope*, *Crax cumanensis* (t. 19) and *C. pipile* (t. 11). These are both probably referable to the same species, viz. *Pipile cumanensis*.

(1786.) Merrem, in his 'Avium Icones et Descriptiones' (fasciculus secundus, p. 40), establishes three divisions of *Craces* :—(1) *Crax*, Linnæus; (2) *Penelope* (type *P. jacupema*); (3) *Ortalia* (type *Phasianus motmot*, Linnæus). He figures his *P. jacupema*, which is probably = *P. marail*, and his *P. leucolophos*, which is certainly = *Pipile cumanensis*.

(1788.) Gmelin, in his 'Systema Naturæ,' makes no alteration in *Crax*, but adopts Merrem's genus *Penelope* with six species. Three of these are good, viz. (1) *P. cristata*, (2) *P. cumanensis* = *Pipile cumanensis*, and (3) *P. marail*. Gmelin's *P. satyra* is a *Cerionis*, and his *P. vociferans* is perhaps one of the Mexican *Ortalidæ*. *Phasianus motmot* and *P. parraka* of the same author are both equal to *O. motmot*.

(1790.) Latham, in his 'Index Ornithologicus,' very little advances our knowledge. His *Crax galeata* = *Crax pauxi*, Linnæus; but Linnæus's specific name having been made generic by Temminck, the name *galeata* must be adopted.

(1802.) Azara, in his 'Apuntamientos para la historia natural de los pajaros del Paraguay,' gives recognizable descriptions of four species of this group :—(1) *el Yacúhú*, upon which *P. obscura* of

Temminck is founded; (2) *el Yacu-caraguata* = *Ortalia canicollis* of Wagler; (3) *el Yacu-apati* = *P. jacutinga* of Spix; and (4) *el Mitu*, a good species, united by subsequent authors with *Crax alector*, till Mr. Gray named it *Crax sclateri*.

(1811.) Humboldt, in his 'Recueil d'Observations de Zoologie' (vol. i. p. 4), describes a new *Ortalia* from the River Magdalena, and calls it *Phasianus garrulus* (= *Ortalia garrula*).

(1815.) Temminck, in the second volume of his 'Histoire Naturelle des Pigeons et des Gallinacés,' gives an excellent account of what was then known of the *Cracidæ*, referring them to three genera of his "*Aves gallinæ*," namely *Pauxi*, *Crax*, and *Penelope*. The genus *Pauxi* is here first established for *P. galeata* and *P. mitu*. In *Crax* Temminck places *C. globicera* (= *C. daubentoni*), *C. rubra* (= *C. globicera* ♀), *C. alector*, and *C. carunculata*, the last species being now described for the first time. Of *Penelope* he gives seven species, two of which are now first established, viz. *P. obscura* upon Azara's "*Yacuhú*," and *P. superciliaris*. These both stand good. Temminck unites *Ortalia* with *Penelope*. He also gives good anatomical descriptions and figures of the larynges and tongues of several of the species of *Cracidæ*.

(1823.) In the 'General History of Birds' (vol. viii.), Latham arranges the *Cracidæ* known to him in two genera of his Gallinaceous order, "*Guan*" and "*Curassow*." To the former he assigns eleven species, to the latter eight species. Little original matter is given.

(1823.) In the twenty-sixth livraison of the 'Planches Coloriées' Temminck publishes an article on the genus *Ourax* (= *Pauxi*), and gives a good figure of *Ourax mitu* (= *Mitua tuberosa*).

(1825.) Spix, in the second volume of his 'Aves Brasilienses,' describes and figures seven species of *Crax* and seven of *Penelope*, viz. :—

- Of this Synopsis.
- | | | |
|-----------------------------|---|-----------------------------|
| (1) <i>Crax fasciolata</i> | = | <i>C. pinima</i> (?) |
| (2) <i>C. urumutum</i> | = | <i>Nothocrax urumutum</i> . |
| (3) <i>C. tomentosa</i> | = | <i>Mitua tomentosa</i> . |
| (4) <i>C. blumenbachii</i> | = | <i>C. globicera</i> ♀ (?) |
| (5) <i>C. globulosa</i> | = | <i>C. globulosa</i> . |
| (6) <i>C. rubrirostris</i> | = | <i>C. carunculata</i> . |
| (7) <i>C. tuberosa</i> | = | <i>Mitua tuberosa</i> . |
| | | |
| (1) <i>Penelope jacuacu</i> | = | <i>P. boliviana</i> (?) |
| (2) <i>P. jacucaca</i> | = | <i>P. jacucaca</i> . |
| (3) <i>P. jacutinga</i> | = | <i>P. jacutinga</i> . |
| (4) <i>P. jacupeba</i> | = | <i>P. jacupeba</i> . |
| (5) <i>P. jacupemba</i> | = | <i>P. superciliaris</i> . |
| (6) <i>P. guttata</i> | = | <i>Ortalia guttata</i> . |
| (7) <i>P. araucuan</i> | = | <i>O. araucuan</i> . |

As is well known, neither Spix's figures nor his descriptions are very accurate; and until the original type specimens have been examined, some of these determinations must remain doubtful. But Spix has certainly added greatly to our knowledge of the group. Not less than three species of *Cracidæ* (viz. *Nothocrax urumutum*, *Mitua*

tomentosa, and *Crax globulosa*) and five species of *Penelopinae* (viz. *P. jacuncaca*, *P. jacupeba*, *Pipile jacutinga*, *Ortalida guttata* and *O. araucuan*) are due to the researches of his expedition.

(1828.) Lesson, in the second volume of his 'Manuel d'Ornithologie,' describes two new species of Guans discovered by Goudot, one of the travelling naturalists of the Jardin des Plantes, in the interior of New Granada. These are *Penelope aburri* (= *Aburria carunculata*) and *Ortalida goudoti* (= *Chamæpetes goudoti*). Lesson likewise establishes *Crax albini*, which probably = *C. globicera* ♀.

(1830.) Wagler publishes a concise but very important paper in the 'Isis,' his "Revisio generis *Penelope*," and describes eighteen species, dividing them into three sections, A, B, & C, corresponding exactly to the genera *Pipile*, *Penelope*, and *Ortalida*. His excellent diagnoses materially assist us in identifying Spix's species. Wagler describes six species as new from the specimens in the Berlin and Munich museums, upon which he founded his observations. These new species are *P. pileata*, *P. purpurascens*, *P. albiventris*, *P. ruficeps*, *P. vetula*, and *P. poliocephala*. The last four belong to the genus *Ortalida*. He also founds his *P. canicollis* upon the "*Yacu-caraguata*" of Azara, of which, however, he had not seen specimens. The whole of these seven Waglerian species are valid; and this paper may be regarded as the earliest scientific article (in a modern sense) upon this subject.

(1831.) Yarrell, at a meeting of this Society, describes the trachea of *Crax yarrelli* (*i.e.* *Crax carunculata*).

(1832.) Wagler, in an article on new genera and species of Mammals and Birds, published in the 'Isis,' institutes two new genera of *Cracidae*, viz. *Salpiza* and *Chamæpetes*. As regards *Salpiza*, it seems that the group thus designated ought to be retained as typical *Penelope*, because Merrem's *Penelope jacupema* certainly belongs to it; so that Wagler's *Penelope* corresponds to what we call (following Reichenbach) *Pipile*, and Wagler's *Salpiza* to our *Penelope*.

(1833.) Prince Max of Neuwied, in his well-known 'Beiträge zur Naturgeschichte von Brasilien,' describes the four species of *Cracidae* that he met with in the wood-region of South-eastern Brazil, in his usual full and accurate manner. These were (1) *Crax rubrirostris* (= *C. carunculata*), (2) *Penelope superciliaris*, (3) *Penelope leucoptera* (= *Pipile jacutinga*), (4) *Penelope araucuan* (= *Ortalida albiventris*).

(1835.) Bennett, in the second volume of the 'Gardens and Menagerie of the Zoological Society,' gives articles with woodcut illustrations on the following species of this group:—

	Mr. Bennett's names.	(Of this Synopsis.)
Page	9. Crested Curassow	= <i>Crax alector</i> .
	65. Galeated Curassow	= <i>Fauxi galeata</i> .
	129. Razor-billed Curassow	= <i>Mitua tuberosa</i> .
	131. Guan	= <i>Penelope cristata</i> .
	325. Red Curassow	= <i>Crax globicera</i> ♀.
	227. Red-knobbed Curassow	= <i>Crax carunculata</i> ♂.

The last of these species is here first described as new under the name *Crax yarrelli*; but the name had been previously mentioned, P. Z. S. 1830-31, p. 33.

(1836.) Johann Müller, in his article upon the different forms of the penis in the class of birds (Abh. Ak. Berlin, 1836, p. 137), shows that *Crax* and *Penelope* agree with *Tinamus* in possessing a small rudimentary penis, which is never found in the ordinary *Gallinacæ*.

(1837.) Swainson, in his 'Classification of Birds,' arranges *Crax* (ranking *Penelope* and the other genera as its subgenera) as a genus of his subfamily *Megapodinæ*, and family *Columbidæ*.

(1844.) Mr. G. R. Gray, in Gray and Mitchell's 'Genera of Birds,' vol. iii., arranges the *Cracidæ* as the first family of his order GALLINÆ, and divides them into two subfamilies, *Penelopinæ* and *Cracinæ*. The *Penelopinæ* contain three genera:—*Ortalida*, with a nominal list of fourteen species; *Penelope*, with ten species; and *Oreophasis*, with one, viz. *O. derbyanus*, which remarkable bird is now introduced into science, and very beautifully figured. Mr. Gray's second subfamily (*Cracinæ*) is divided into two genera, *Crax* and *Pauxi*. An excellent figure is given of the female of *Pauxi galeata*. Six species are referred to *Crax* and three to *Pauxi*. Altogether Mr. Gray enumerates thirty-four species of *Cracidæ* as now known to science; but it must be born in mind that several of the names given are merely synonyms. Three subsequently described species are added to the list in the appendix to this work.

(1844-46.) Tschudi, in his 'Fauna Peruana,' gives four species of *Cracinæ* and six species of *Penelopinæ* as met with in the wood-region of Eastern Peru. His identifications of these birds must be received with caution, being in some cases apparently only founded on recollection. *Crax temminckii*, which he describes as new, is certainly the Central-American *C. globicera*. *Penelope aspersa*, described as new = *Ortalida guttata*; *P. rufiventris* = *Chamæpetes goudoti*. Tschudi, however, gives several interesting anatomical details, in particular concerning the penis of *Penelope*, in confirmation of Johann Müller's discoveries on this subject.

(1846.) The second volume of the 'Knowsley Menagerie' contains four large figures, by Lear, of species of *Penelope*, viz. :—

	Knowsley Menagerie.	(Of this Synopsis.)
Pl.	8. <i>P. superciliaris</i>	= <i>P. jacucaca</i> .
	9. <i>P. pileata</i>	= <i>P. pileata</i> .
	10. <i>P. pipile</i>	= <i>Pipile cumanensis</i> .
	11. <i>P. purpurascens</i>	= <i>P. marail</i> .

(1847.) Sir William Jardine, in one of his articles on the birds of Tobago in the 'Annals of Nat. History,' describes *Ortalida ruficauda* as a new species from that island, and the following year ('Contributions to Ornithology, 1848) figures and describes its trachea.

(1848.) Cabanis, in the 'Fauna of British Guiana,' contained in the third volume of 'Schomburgk's Travels,' enumerates five species of *Penelopinæ* and four of *Cracinæ* as obtained by Schomburgk in that country. These are all probably rightly determined, except

perhaps *P. jacucaca*, concerning the identification of which we entertain some doubts.

(1849.) *Penelope pileata* is figured by Des Murs in the 'Iconographie Ornithologique' from a specimen in the Paris Museum.

(1850.) Fraser, in the 'Proceedings' of this Society, describes two new *Cracidæ* from specimens living in the Kuowsley collection, viz. *Crax alberti* and *Penelope nigra*, the latter being our *Penelopina nigra*. But note that the bird figured as the female of *C. alberti*, l. c. t. xxvii. is the female of *C. globicera*.

(1852.) Reichenbach, in his 'Avium Systema Naturæ,' which forms a kind of preface to his 'Handbuch der speciellen Ornithologie,' gives a list of genera of this family, mainly in explanation of the previously published lithographic plates of structural parts. He establishes two new genera—*Penelops* for *Penelope albiventris* of Lesson (= *Ortalida leucogastra*), and *Aburria* for *Penelope aburri* of Lesson. The former species is a typical *Ortalida*; the latter genus we adopt.

(1856.) Prince Charles Bonaparte publishes his 'Tableaux Paralléliques de l'Ordre des Gallinacés' in the 'Comptes Rendus' of the Academy of Sciences of Paris. After characterizing two new species of the group, viz. *Pipile argyrotis* (= *Penelope argyrotis*) and *Ortalida montagnii* (= *Stegnolæma montagnii*), but so shortly as to be unrecognizable without reference to the original specimens, in a table of the *Craces*, as he calls them, he divides these birds into two families, *Cracidæ* and *Penelopidæ*; of the former he enumerates ten species, of the latter twenty-nine. The synonymy and arrangement of the species are full of errors, and are barely worth criticism, showing the same marks of haste as most of his later writings. The genus *Pipile*, however, must take date from this paper.

(1856.) Burmeister gives an account of the Brazilian *Cracidæ* in the third volume of his 'Systematische Uebersicht der Thiere Brasiliens.' The general arrangement of the genera and higher groups is very good; but the species are not always correctly identified, and there are some errors in the localities: e.g. *Crax blumenbachii*, Spix, is united with *Crax rubrirostris* (i. e. *C. carunculata*) and *C. fasciolata*! The species met with by Burmeister himself in S.E. Brazil were only three, namely, *Penelope superciliaris*, *P. araucuan* (i. e. *Ortalida albiventris*), and *Crax blumenbachii* (i. e. *C. carunculata*). Burmeister arranges *Opisthocomus* as an intermediate form between *Penelope* and *Crax*; but those who do not go so far as to make this wonderful bird an order of itself (following Huxley) must, we think, at least give it the rank of a separate family.

(1858.) Von Pelzeln, in one of his articles on new birds in the Imperial Cabinet of Vienna, describes *Penelope kujubi* of Natterer's MS. and the two other species of the genus *Pipile*. He gives also Natterer's notes and remarks on these three birds.

(1860.) Baird, in his 'Birds of North America,' includes one member of this group as found on the Rio Grande, within the limits of the United States, and proposes to call it *O. m'calli*, the same bird having been previously referred to *O. vetula* by Lawrence, and

to *O. poliocephala* by Cassin. We have given our reasons below for considering Mr. Lawrence's determination as correct.

(1860.) Mr. G. R. Gray publishes a synopsis of the genus of *Penelope* in this Society's 'Proceedings,' giving short Latin characters of all the species known to him. Four species are described as new, viz. :—

G. R. Gray.	(Of this Synopsis.)
<i>P. nigricapilla</i>	= <i>P. obscura</i> .
<i>P. bridgesi</i>	= <i>P. obscura</i> .
<i>P. sclateri</i>	= <i>P. sclateri</i> .
<i>P. lichtensteini</i>	= <i>P. argyrotis</i> .

(1860.) Salvin, in the second volume of 'The Ibis' (p. 248), gives full details of the history of the *Oreophasis derbyanus*, which was previously entirely unknown except from Mr. Gray's figure.

(186-?) Prof. Reichenbach publishes his "Vollständigste Naturgeschichte der Tauben und Taubenartigen Vögel," forming part of his 'Handbuch der speciellen Ornithologie.' We cannot find any date attached to any part of this work, and therefore cannot give the exact date of issue. Reichenbach divides the natural family *Cracidæ* into two groups—*Cracinæ* and *Penelopinæ*, and, in order to fill up the voids in the number of his ridiculous quaternary system, associates with them the *Didinæ* and *Microdactylinæ* (*i. e.* the *Cariamæ*), and constitutes out of this heterogeneous mass his family "*Alectorinæ*," the fourth division of his "*Columbariæ*." Reichenbach's account of the genera and species of *Cracidæ* is, as regards merit, about on a par with the above-mentioned arrangement of the higher divisions of the group. It is evidently a wretched compilation, written mainly without reference to original specimens. No less than four new species of *Crax* and one of *Penelope* are sought to be established solely upon figures of the older authors; and *Crax* itself is subdivided into four subgenera (*Crax*, *Mituporanga*, *Crossolaryngus*, and *Sphærolaryngus*), the very distinct *Crax urumutum* being left among the typical *Craces*! *Ortalida leucogastra* and *O. albiventris* are referred to the genus *Chamæpetes*! *Penelopsis* (established in the 'Av. Syst. Nat.' as *Penelops*) is here transferred, to become the type of a genus uniting *P. rufiventris* of Tschudi and *P. adspersa* of the same author!

(1866.) Mr. G. R. Gray describes, in this Society's 'Proceedings,' a new species of *Penelope*, *P. greeyi*, from a specimen living in the Society's gardens.

(1867.) Mr. G. R. Gray publishes his 'List of specimens of Birds of the Order Gallinæ in the British Museum.' In this important work the *Cracidæ* are arranged as the second family of the order, the first being the *Pteroclidæ*, and the third the *Megapodidæ*. This is no doubt very nearly its natural position, as the *Pteroclidæ* are still more nearly allied to the *Columbæ* than the Peristeropodous *Gallinæ*. As in his 'Genera of Birds,' Mr. Gray divides the *Cracidæ* into two subfamilies, *Penelopinæ* and *Cracinæ*. To the former subfamily are referred three genera (*Penelope*, *Ortalida*, and *Oreophasis*), containing altogether thirty-five species represented in the national

collection. The names of ten other species are referred to as perhaps valid. Six species of this subfamily are here described as new, viz. :

G. R. Gray.	(Of this Synopsis.)
<i>Penelope jacquini</i>	= <i>Pipile cumanensis</i> .
<i>Ortalida superciliaris</i>	= <i>O. superciliaris</i> .
<i>O. bronzina</i>	= <i>O. ruficauda</i> .
<i>O. plumbeiceps</i>	= <i>O. vetula</i> .
<i>O. wagleri</i>	= <i>O. wagleri</i> .
<i>O. cinereiceps</i>	= <i>O. cinereiceps</i> .

Mr. Gray's second subfamily, *Cracinae*, is divided into two genera, *Crax* and *Pauxi*, the former containing seven, the latter three species. Three species of *Crax* are likewise mentioned, of which no specimens are in the national collection. Two species of *Crax* are described as new, viz. *C. sclateri* and *C. daubentoni*. We mainly agree with, and have very nearly followed, Mr. Gray's discrimination of the species of this difficult genus, the principal difference being that we have restored to the species which he calls *C. blumenbachii* what we have endeavoured to show is its older name, *C. globicera*.

(1867.) Salvin, in his article on the birds of Veragua, published in the 'Proceedings' of this Society, describes a second species of the genus *Chamæpetes*, *C. unicolor*.

(1868.) Prof. Huxley, in his article "On the Classification and Distribution of the Alectoromorpha and Heteromorpha," published in this Society's "Proceedings," defines the Alectoromorpha, or typical Gallinaceous birds, and shows that they are divisible into two primary groups—the *Peristeropodes* and *Alectoropodes*, of which the former embraces two families, the *Cracidae* and *Megapodidae*. The exact position of the *Cracidae* in the Systema is thus first accurately determined.

(1869.) Dr. Cabanis, in one of his articles upon the birds of Costa Rica, describes as new *Ortalida frantzii*, which, however, = *O. cinereiceps*, G. R. Gray (1867).

(1870.) The third portion of Von Pelzeln's 'Ornithologie Brasiliens' contains a most important addition to our knowledge of the CRACIDÆ in the account of the species of this group collected by Natterer, altogether 22 in number. Two of these are described as new; and a third (*Crax mikani*) is characterized from specimens in the Imperial Cabinet derived from another source. Descriptions are likewise given of other, imperfectly known species; and many important notes are added, taken either from Natterer's MS. or from v. Pelzeln's own observation. The subjoined list will show the alterations we have ventured to propose in v. Pelzeln's nomenclature:—

Orn. Bras.	v. Pelzeln.	(Of this Synopsis.)
P. 280.	<i>Penelope cristata</i>	= <i>Penelope greeyi?</i>
	281. <i>P. nigricapilla</i>	= <i>P. jacupeba</i> .
	283. <i>P. nattereri</i>	= <i>Pipile cumanensis</i> .
	284. <i>P. grayi</i>	= <i>P. cumanensis</i> .
	285. <i>Ortalida superciliaris</i>	= <i>Ortalida araucuan</i> .

Orn. Bras.	V. Pelzeln.	(Of this Synopsis.)
P. 285.	<i>O. araucan</i>	= <i>O. albiventris</i> .
	286. <i>O. albiventris</i>	= <i>O. guttata</i> .
	343. <i>Crax mikani</i> ♂	= <i>Crax daubentoni</i> .
	„ <i>C. mikani</i> ♀	= <i>C. alberti</i> .

Sect. III. *Synopsis of the Species of Cracidæ.*

The 51 species of Cracidæ known to us seem to be naturally separable into three subfamilies. The external differences between the first two of these groups, although very appreciable to the eye, are not easily expressed in strict definition. There can, however, be no doubt that the Curassows and Guans belong to naturally distinct forms; and Prof. Huxley (P. Z. S. 1868, p. 297) has pointed out a trenchant difference in the proportions of their pelvis, which renders their skeletons easily recognizable. In the *Penelopinæ* the “moiety of the dorsal aspect of the pelvis, which is bounded in front by a line drawn through the acetabula,” or “postacetabular area” (as Prof. Huxley proposes to call it), is comparatively broad; in the *Cracinæ* it is narrow. Combining this osteological character with a marked divergence in the form of the rostrum of the two sections, we may divide the subfamilies as follows:—

- a. area postacetabulari angusta: rostro superiore altiore quam latum; culmine compresso I. CRACINÆ.
- b. area postacetabulari lata: rostro superiore latiore quam altum: culmine depresso.
 - a'. vertex plumis obtectus: mesorhinium nudum: nares patulæ II. PENELOPINÆ.
 - b'. vertex tuberculo osseo munitus: mesorhinium dense plumosum: nares absconditæ III. OREOPHASINÆ.

Taking these three subfamilies in order, we propose to arrange them as follows:—

Subfam. I. CRACINÆ.

- a. rostri cera mollis, plus minusve tumida: nares patulæ in media maxilla positæ 1. *Crax*.
- b. rostrum usque ad basin corneum, cera nulla: nares ad basin maxillæ positæ.
 - a'. lora nuda, nares patulæ 2. *Nothocrax*.
 - b'. lora dense plumosa, nares plumis absconditæ.
 - a''. sexus dissimiles: tuberculum frontale maximum, oviforme 3. *Pauxi*.
 - b''. sexus similes: culmen valde elevatum sed vix tuberculatum 4. *Mitua*.

Genus 1. CRAX.

	Type.
<i>Crax</i> , Linn. S. N. i. p. 269 (1766)	<i>C. alector</i> .
<i>Mituporanga</i> , Reichenb. Tauben, p. 136 (186 ?)....	<i>C. globicera</i> .
<i>Crossolaryngus</i> , Reichenb. Tauben, p. 136 (186 ?)..	<i>C. globulosa</i> .
<i>Spherolaryngus</i> , Reichenb. Tauben, p. 136 (186 ?)..	<i>C. alberti</i> .

Clavis specierum.

- a. pectore immaculato nigro.
 a'. mandibularum caruncula nulla.
 a''. loris plumosis..... 1. *globicera*.
 b''. loris nudis.
 a'''. cauda tota nigra..... 2. *alector*.
 b'''. cauda albo terminata 3. *sclateri*.
 b'. mandibula carunculata.
 c''. cera flava.
 { cauda tota nigra..... 4. *globulosa*.
 { cauda albo terminata 5. *daubentoni*.
 d''. cera rubra 6. *carunculata*.
 e''. cera cærulea..... 7. *alberti*.
 b. pectore nigro albo transfasciolato 8. *pinima*.

1. CRAX GLOBICERA.

Crax globicera, Linn. S. N. i. p. 270 (*partim*); Taylor, Ibis, 1860, p. 311; Salvin, Ibis, 1861, p. 143; Sclater, P. Z. S. 1860, p. 253; Lawr. Ann. Lyc. N. Y. viii. p. 12, ix. p. 139; Frantz. J. f. O. 1869, p. 373.

Crax temminckii, Tsch. F. P. Aves, p. 287.

Crax alberti, ♀, Fraser, P. Z. S. 1850, p. 250, tab. xxviii. (♀.)

Crax blumenbachii, G. R. Gray, List of Gall. p. 15.

Crax alector, Scl. & Salv. Ibis, 1859, p. 223; Moore, P. Z. S. 1859, p. 61.

Crax rubra, Linn. S. N. i. p. 270 (♀); Temm. Fig. et Gall. iii. p. 21 et p. 687 (♀); Lawr. Ann. L. N. Y. vii. p. 301 (♀); Bennett, Gard. & Men. Z. S. ii. p. 225 (♀).

Curasso bird, Edwards's Gleanings, pl. 295; *undè*

Crax edwardsi, Reich. Tauben, p. 134.

Crax albini, Lesson, Trait. d'Orn. p. 484 (♀).

Nitenti-nigra: ventre imo crissoque albis: cristæ elongatæ plumis nigris, apicem versus recurvis: loris plumulosis: cera tuberculata et rostro ad basin luteis, rostri apice cærulescente: pedibus cærulescenti-corneis: long. tota 34 poll. Angl., alæ 18·5, caudæ 15·5, tarsi 4·7.

Fem. Castanea, ventre imo cinnamomeo: dorso superiore plus minusve nigro induto: capite cristato et cervice undique nigris, albo maculatis: alis extus caudaque nigro et ochraceo plus minusve variegatis et transfasciatis: rostro nigricante, apice pallide cærulescente: pedibus corneis.

Hab. Western Mexico (*Deppe*); Tehuantepec (*Sumichrast in Mus. Smithson.*); prov. Vera Cruz (*Sallé*); Guatemala, Vera Paz and Pacific coast (*Salvin*); Belize (*Leyland*); Honduras (*Taylor*); Costa Rica (*v. Frantz.*); Panama (*M^cCleannan*).

Mus. Brit., Smithson., S.-G.

Linnæus's *Crax globicera* is founded mainly upon the *Crax curassous* of Brisson (Orn. i. p. 300), which is more likely to be intended for this species than for any other. Brisson mentions the *tubercula ad basin rostri, rotunda, lutea*—which excludes every thing except the present bird and *C. daubentoni*. And as he says nothing whatever of the tail being tipped with white, the balance of evidence is in favour of the former hypothesis. *Crax rubra* of Linnæus, founded

upon *Crax peruvianus* of Brisson (*l. c.* p. 305), is, there can be little doubt, intended for the female of the present bird.

The first author who appears to have correctly identified these birds as male and female is Tschudi, who, in his 'Fauna Peruana,' accurately describes both sexes under the name *Crax temminckii*, from specimens obtained by Deppe in Western Mexico; but he is no doubt in error in supposing that this was the species that he himself saw in the wood-region of Eastern Peru.

In our first paper on the Ornithology of Guatemala we erroneously called this bird *Crax alector*. This mistake was subsequently rectified, and the Central-American bird was referred to *Crax globicera*, which name has generally been adopted by more recent writers for the Central-American bird.

In Mr. G. R. Gray's 'List of Gallinæ' this Curassow is called *Crax blumenbachii*, following Spix's figure (*Av. Bras. ii. t. 64*). It is possible Mr. Gray may be correct in this reference, as we have seen Central-American specimens nearly as dark as represented in Spix's figure; but if this be so, it can hardly be true, as Spix states, that his specimen was obtained from Rio.

This Curassow is the only species of the genus and subfamily met with in America, north of Panama. We have examined a large number of specimens from different localities between the isthmus and Southern Mexico. The male is quite constant in colour, except that in one Panama specimen the tail shows a very narrow margin of white. The female, on the contrary, is very variable, as we have already pointed out in our diagnosis. In some specimens the wings are wholly red, in others much banded with black and cinnamonaceous; in some specimens also the tail-bands are very slight, and almost evanescent; in others they are broad and conspicuous. The upper portion of the back varies from black to chestnut.

2. CRAX ALECTOR.

Crax alector, Linn. *S. N. i.* p. 269; Temm. *Pig. et Gall. iii.* p. 27 et p. 689; Vieill. *Gall. Ois. ii.* p. 6, t. 199; Cab. in. *Schomb. Guian. iii.* p. 746; Reichenb. *Tauben*, p. 130; Bennett, *Gardens & Men. ii.* p. 9; Pelzeln, *Orn. Bras. p. 286*.

Purpurascenti-nigra: ventre imo crissoque albis: cristæ brevis plumis nigris, versus apicem recurvis: loris nudis: cera et rostro ad basin flavis, hujus apice cærulescente: pedibus corneis: long. tota 35, alæ 14·5, caudæ 13·5, tarsi 4·5.

Fem. *Mari similis, sed crista intus albo parce transfasciata.*

Hab. British Guiana (*Schomb.*); Rio Negro, Rio Vaupé, and Rio Branco (*Natt.*).

Mus. Brit., Vindob., S.-G.

The species most liable to be confounded with the present Curassow are *Crax globicera* and *Crax sclateri*. From both of these it is distinguishable by the purple tinge of its plumage, which is very noticeable in living specimens, but is also plainly shown in skins. From *C. globicera* it is likewise distinguishable by the naked lores and by the want of the protuberance on the cere; from *C. sclateri* by the absence of the white tips to the tail-feathers and the black

thighs. It differs not only from these, but from almost all other members of the genus in the sexes being nearly alike.

The patria of *C. alector* is Guiana and the adjoining districts of Amazonia up to the Rio Negro. In Upper Amazonia it is replaced by *C. globulosa*.

3. CRAX SCLATERI.

Mitu, Azara, Apunt. iii. p. 83. no. 338.

Crax alector, Hartl. Ind. Az. p. 22.

Crax sclateri, Gray, List of Gall. p. 14; Pelzeln, Orn. Bras. p. 287.

Crax circinatus, Licht. MS. in Mus. Berol. (teste Pelzelno).

Crax discors, Natt. MS. in Mus. Berol. (teste Pelzelno).

Crax azaræ, Natt. MS. in Mus. Vindob. (teste Pelzelno).

Nitenti-nigra: ventre imo, crisso et caudæ apice albis: cristæ mediocris plumis nigris versus apicem recurvis: loris nudis, cera et rostro ud basin flavis: pedibus corneis: long. tota 32, alæ 14, caudæ 14, tarsi 4.

Fem. *Supra nigra, ochraceo-albo, nisi in cervice, transfasciata: crista alba, basi et apice nigris: subtus gula et cervice nigris: abdomine cinnamomeo, pectore nigro transfasciato: rostri basi obscura, apice cum pedibus flavicantibus.*

Hab. Paraguay (Azara et Page); Mato Grosso (Natterer).

Mus. Brit., Vindob., Smithson., S.-G.

Azara clearly describes both sexes of this Curassow, which appears to be the sole representative of the group in Paraguay and the adjacent portion of the Brazilian province of Matto Grosso.

It was, however, confounded with other species, or provided only with MS. names, till Mr. Gray described it in his list of Gallinæ in 1867.

As already remarked, the male of this species closely resembles the corresponding sex of *C. alector*; it is singular, therefore, that the females of the two species should be so very different.

Our description of *Crax sclateri* is taken from Nattererian specimens in the collection of Salvin and Godman; but we have compared them with Smithsonian skins collected by Capt. Page in Paraguay, and find them agree in every respect.

4. CRAX GLOBULOSA.

Crax globulosa, Spix, Av. Bras. ii. p. 50, t. 65 (♂), 66 (♀); Reichenb. Taub. p. 135.

Crax globicera, Bates, Nat. on the Amazon, ii. p. 112.

Nitenti-nigra: ventre imo crissoque albis: crista nigra recurva: loris plumosis: cera tuberculata et mandibula utrinque ad basin carunculata flavis: rostri apice nigra: pedibus rubris: long. tota 36, alæ 16, caudæ 14·5, tarsi 4·4.

Fem. *Mari similis, sed tuberculo et carunculis rostri nullis: ventre fulvo: pedibus rubescentibus.*

Hab. Upper Amazon (Spix); Pebas (Castelnau et Deville); Rio Napo (*Mus.* G. N. L.)

Mus. Brit., Paris., et G. N. Lawrence.

The well-developed yellow caruncles at the base of the mandible distinguish this species from all its allies except *C. daubentoni*, in which the tail is broadly tipped with white. We have only seen one female of this species—in Mr. Lawrence's collection. It agrees with Spix's figure and description. The variation of the sexes in this bird corresponds to that which obtains in *Crax carunculata*, which has likewise conspicuous caruncles on the base of the bill. In the latter case, however, the caruncles are red instead of yellow.

5. CRAX DAUBENTONI.

Hocco, Faisan de la Guiane, Buff. Pl. Enl. 86.

Crax aldrovandi, Reichenb. Columb. p. 134?

Crax daubentoni, G. R. Gray, List of Gall. p. 15.

Crax globicera, Temm. Nat. Hist. des Gall. iii. p. 12 et p. 686 ; Reichenb. Taub. p. 133.

Crax mikani ♂, Pelzeln, Orn. Bras. p. 343 (♀)?

Nitenti-nigra: ventre imo et caudæ apice albis: cristæ elongatæ plumis nigris recurvis: laris plumosis: cera tuberculata et mandibula utrinque ad basin carunculata flavis: pedibus nigricantibus: long. tota 32, alæ 15·5, caudæ 14, tarsi 4·5.

Fem. *Mari similis, sed crista ad basin albo obsolete fasciata: ventre et tibiis albo transfasciolatis: cera et rostro nigris.*

Hab. Venezuela, near Caraccas (*Levraud*).

Mus. Brit., Paris.

This Curassow was confounded by the older authors with *C. globicera*; and it must always, perhaps, remain somewhat of an open question to which bird that name is more properly to be applied. Mr. Gray first recognized the existence of the two species, and in his 'List of Gallinæ' gave the name *daubentoni* to the present bird, considering it to be that represented by Buffon and Daubenton as the *Hocco, Faisan de la Guiane* in the 'Planches Enluménées.' The two species are certainly close allies, the differences between them consisting in the present bird having caruncles at the base of the mandible, and white tips to the rectrices. The former character, however, is not very conspicuous, nor are these caruncles represented in the above-mentioned plate.

We were for some time in doubt respecting the correct habitat of this species; but during a recent examination of the examples of this group in the Paris Museum, Sclater found a specimen of it which had been transmitted from the vicinity of Caraccas by M. Levraud. This has indicated, what we before suspected, that the true *patria* of *Crax daubentoni* is the littoral of Venezuela and the northern portions of New Granada, where it takes the place of *C. globicera* on the north and *C. alector* on the south*.

* Since this paper was written, the locality of this species has been further confirmed by the receipt by this Society of a living pair of this *Crax* from Tucacas, in Northern Venezuela (presented by James Wright, Esq., Sept. 29th).

The bird described by Herr v. Pelzeln as the *male* of his *Crax mikani* seems to agree tolerably well with the *female* of this species.

6. CRAX CARUNCULATA.

Crax carunculata, Temm. Fig. et Gall. iii. pp. 44, 690 (1815); Sw. An. in Men. p. 183.

Crax rubrirostris, Spix, Av. Bras. ii. p. 51, t. 67; Max. Beitr. iv. p. 528.

Crax blumenbachii, Burm. Syst. Ueb. iii. p. 345.

Crax yarrellii, Bennett, Gard. and Men. ii. p. 227; Yarrell, P. Z. S. 1830-1, p. 33; Sw. An. in Men. p. 188; Jard. et Selby, Ill. Orn. iv. pl. vi.

Nitenti-nigra: ventre imo crissoque albis: crista nigra, versus apicem recurva: loris nudis: ceræ tuberculo parvo et caruncula utrinque ad basin mandibulæ rubris: pedibus carneis: long. tota 34, alæ, 15·5, caudæ 13·5, tarsi 4.

Fem. *Mari similis, sed crista albo fasciolata et ventre imo crissoque rufis.*

Hab. Wood-region of S.E. Brazil from Rio to Bahia (*Max. et Burm.*).

Mus. Brit.

This Curassow is easily distinguishable by its red bill, and has therefore been less often confounded with other species than most of its congeners. Burmeister, however, has united it to *Crax blumenbachii* of Spix, supposing that Spix's figure (Av. Bras. ii. t. 64) may represent the female of the present bird. This we cannot agree to. Spix's plate obviously represents the female of *C. globicera*, or of some allied species of which we do not yet know the male. If his locality (Rio) be correct, the latter is probably the case.

7. CRAX ALBERTI.

Crax alberti, Fraser, P. Z. S. 1850, p. 246, t. 27; Gray, List of Gallinæ, p. 15; Reichenb. Tauben, p. 136.

Crax mikani ♀, Pelzeln, Orn. Bras. p. 343 (?).

Nitenti-nigra: ventre imo, crisso et caudæ apice albis: crista brevi, recurva, nigra: loris dense plumosis: ceræ tuberculo et mandibulæ carunculis cæruleis: rostri apice corneo: pedibus plumbeis.

Fem. *Nigra*: crista albo fasciolata: dorso, alis extus et cauda albo anguste transfasciatis: remigibus externis et abdomine toto castaneis: ventre medio crissoque pallidioribus: pedibus pallide carneis.

Hab. New Granada.

Mus. Brit., Paris., S.-G.

Mr. Fraser first described this Curassow, which may be readily known by its densely feathered lores and blue wattles, from a specimen living in the aviaries at Knowsley in 1850. It is, however, obvious that the bird described by him as the female of *C. alberti* is not the true female of this species, but that of *Crax globicera*.

Crax alberti is now not unfrequently brought alive to this country. There have been of late years several males in the Society's Gardens; and at the present time there is one female. Its correct habitat has

never yet been given; but we have recently obtained abundant evidence that it inhabits New Granada. A female in the collection of Salvin and Godman was transmitted direct from Bogotá by Mr. G. Crowther. There is a male in the Paris Museum, sent from the same locality by Dr. Lindig, and a female from Sta. Martha by M. Bonnacourt.

The bird described by Herr v. Pelzeln as the female of his *Crax mikani* seems to be the female of this species.

8. CRAX PINIMA.

Crax pinima, Pelzeln, Orn. Bras. p. 287 et p. 341.

Crax fasciolata, Spix, Av. Bras. ii. p. 48, t. 62, a (?).

Nigra: *crestæ plumis recurvis, albis, ad basin et ad apicem nigris: dorso toto, alis extus et cauda albo transfasciatis: abdomine cervino, pectore et lateribus nigro transfasciatis: loris nudis, aut plumulis paucis obsitis: rostro nigro, ad basin flavo notato: pedibus rubris: long. tota 29, alæ 13·5, cauda 11·5, tarsi 3·7.*

Hab. Vicinity of Pará (*Natt.*).

Mus. Vindob.

Natterer obtained a single specimen of the bird described by Pelzeln as *Crax pinima* in the neighbourhood of Pará, and, as stated by v. Pelzeln, had at first doubts as to its being a valid species. He remarks in his MS. that the *Mutum pinima*, as it is called there, does not differ from the Curassow of Cujabá and Paraguay (*i. e.* *C. sclateri*). Afterwards he appears to have changed his opinion, and to have designated the present species *C. pinima*. Natterer did not determine the sex of his single specimen; and it is therefore possible that it may have been a female. The specimen we have described is undoubtedly of that sex, as it was formerly living in the Society's collection, and was determined by Mr. Bartlett. Comparing it with two undoubted females of *C. sclateri*, we find it differs principally in the narrowness of the transverse bars above, in the sides of the belly being transversely barred with black, and the broad white tips to the tail-feathers. Pelzeln describes *C. pinima* as smaller than *C. sclateri*; but our specimen is of about the same dimensions. Nor in the bird we describe is it correct to say "*Plumæ crestæ nigræ, fasciis solum duabus albis ornata,*" as the crest is white, with the bases and tips of the feathers black.

These differences, however, are of no very great importance; and, on the whole, we are of opinion that the *Mutum pinima* of Pará will be found to constitute a different species from *Crax sclateri*. Whether, however, the male will be found to resemble the female, or the corresponding sex of *C. sclateri*, remains to be proved. Von Pelzeln describes what he considers may possibly be the male of this species, from a specimen formerly living in the Imperial Menagerie at Schönbrunn, but does not point out how it is to be distinguished from *C. sclateri*.

There are two birds now living in the Society's Gardens which are probably referable to this species. One of them was acquired, some years ago, along with the bird from which we have taken our

characters, and is identical with it in plumage; the other, which has been recently purchased from the Jardin d'Acclimatation, is apparently darker, and has the white bands on the upper surface extremely narrow.

Genus 2. NOTHOCRAX.

Type.

Nothocrax, Burm. Syst. Ueb. iii. p. 347 *N. urumutum*.

NOTHOCRAX URUMUTUM.

Crax urumutum, Spix, Av. Bras. ii. p. 49, t. 62; Cab. in Schomb. Guian. iii. p. 746; Reichenb. Tauben, p. 132; Pelzeln, Orn. Bras. p. 288.

Urax urumutum, Burm. Syst. Ueb. iii. p. 347.

Rufescens, nigro vermiculata; pilei cristati plumis elongatis pendentibus nigris: cervice undique et corpore subtus castaneis, ventre imo in cinnamomeum trahente: cauda nigricante, rectricum pogoniis externis rufescentibus nigro vermiculatis: spatium oculari late nudo, in ave viva cærulescenti-flavo: rostro rubro: pedibus corylinis: long. tota 24, alæ 12, caudæ 10, tarsi 2.6.

Hab. British Guiana (*Schomb.*); Rio Negro (*Spix et Natt.*); Rio Pastaza, Upper Amazons (*E. Bartlett*).

Mus. Brit., Vindob., Derb.

Genus 3. PAUXI.

Type.

Pauxi, Temm. Fig. et Gall. iii. p. 683 (1815) *P. galeata*.

Ourax, Cuv. Règn. An. i. p. 440 (1817) *P. galeata*.

Lophocerus, Swains. Class. of B. ii. p. 353 (1837) *P. galeata*.

Urax, Reichenb. Av. Syst. Nat. p. xxvi (1842) *P. galeata*.

PAUXI GALEATA.

Crax pauxi, Linn. S. N. i. p. 270.

Pierre de Cayenne, Buff. Pl. Enl. 78.

Crax galeata, Lath. Ind. Orn. ii. p. 624.

Pauxi galeata, Temm. Fig. et Gall. iii. p. 1 et p. 683; Reichenb. Tauben, p. 137.

Ourax pauxi, Cuv. Règn. Anim. 1817, i. p. 441; Bennett, Gard. & Men. ii. p. 65.

Lophocerus galeatus, Swains. Classif. of B. ii. p. 353 et An. in Men. p. 184.

Ourax galeata, Tsch. F. P. p. 289.

Nigra æneo nitens: ventre imo et caudæ apice albis: pilei plumis brevibus, erectis: tuberculo frontali maximo, oviformi, cæruleo: rostro rubro: pedibus carneis: loris dense plumosis: long. tota 34, alæ 16, caudæ, 13, tarsi 4.

Fem. Rufescens, nigro undulata et vermiculata, capite undique nigro: tectricum alarum et secundariorum marginibus et caudæ apice albicantibus.

Hab. Cayenne (*Buffon*); Rio Cassiquiari and Orinoco (*Natt.*); Venezuela, near Caraccas (*Levaud in Mus. Paris*).

Mus. Brit., Paris.

Buffon assigns Cayenne as the habitat of this Curassow; but Schomburgk does not mention it as found in British Guiana. A more certain locality is the Rio Cassiquari and Upper Orinoco, where Natterer, although he did not collect specimens, obtained certain evidence of its existence (*Cf.* Von Pelzeln, Orn. Bras. p. 289). Specimens of this bird in the Paris Museum were transmitted from Caraccas by M. Levraud. Tschudi states that it occurs in Eastern Peru. This is possible, but we have never seen it in collections from the Upper Amazon*.

Genus 4. MITUA.

Type.

Mitu, Less. Trait. d'Orn. ii. p. 485 (1831) *M. tuberosa*.*Mitua*, Strickl. Ann. Nat. Hist. vii. p. 36 (1841) *M. tuberosa*.*Clavis specierum.*

- a. rostri culmine cultrato: caudæ apice albo 1. *M. tuberosa*.
 b. rostri culmine rotundato: caudæ apice rufo 2. *M. tomentosa*.

1. MITUA TUBEROSA.

Crax mitu, Linn. S. N. i. p. 270.*Pauxi mitu*, Temm. Pig. et Gall. iii. pp. 8, 685.*Mitu brasiliensis*, Reichenb. Columb. p. 137.*Ourax mitu*, Cuv. Règ. An. 1817, i. p. 441; Temm. Pl. Col. 153; Bennett, Gard. and Men. ii. p. 129.*Urax mitu*, Burm. Syst. Ueb. iii. p. 349.*Crax tuberosa*, Spix, Av. Bras. ii. p. 51, t. 67 a.*Mitua tuberosa*, Bates, Nat. on the Amazon, ii. p. 112.*Urax tuberosa*, Burm. Syst. Ueb. iii. p. 348.*Ourax erythrorhynchus*, Swains. Classif. of B. ii. p. 352, et An. in Men. p. 187.*Urax erythrorhynchus*, Cab. in Schomb. Guian. iii. p. 747.

Nigra, purpurascens perfusa: ventre imo castaneo: caudæ apice albo: loris dense plumosis: pilei plumis elongatis, retroductis: culmine valde elevato, antice cultrato, postice et supra nares incrassato, rubro: pedibus rubris: long. tota 33, alæ 14, caudæ 12, tarsi 4.

Fem. *Mari similis*.

Hab. British Guiana (*Schomb.*); Pará, Rio Madeira, Mato Grosso (*Natterer*); Rio Tapajos (*Bates*); Eastern Peru, Chamicurros (*E. Bartlett*).

Mus. Brit., Vindob., S.-G.

2. MITUA TOMENTOSA.

Crax tomentosa, Spix, Av. Bras. ii. p. 49, t. 63.*Pauxi tomentosa*, G. R. Gray, Gen. of B. iii. p. 487.

* Since this paper was written, the Society have received two living males of this species direct from Santa Martha along with a female of *Crax alberti*. It is probable, therefore, that *Pauxi galeata* is likewise found in the valley of the Magdalena.

Urax tomentosa, Cab. in Schomb. Guian. iii. p. 746; Burm. Syst. Ueb. iii. p. 349.

Nigra, purpureo nitens: ventre imo castaneo: caudæ apice rufo: pilei plumis subelongatis, paulum exstantibus: loris dense plumosis: rostri culmine elevato, subcompresso, rotundato, rubro, apice flavicante: pedibus rubris: long. tota 33, alæ 15, caudæ 13·5, tarsi 4·5.

Fem. *Mari similis.*

Hab. British Guiana (*Schomb.*); Rio Negro (*Spix et Natt.*); Rio Branco (*Natt.*)

Mus. Brit., Vindob., S.-G.

Subfam. II. PENELOPINÆ.

Conspectus generum Penelopinorum.

- a. gulæ palear medium.
 - a'. remiges externi angustati sed integri.
 - a''. gula plumosa 1. *Stegnotæma.*
 - b''. gula nuda.
 - a'''. sexus similes 2. *Penelope.*
 - b'''. sexus dissimiles 3. *Penelopina.*
 - b'. remiges externi excisi.
 - a''. palear breve 4. *Pipile.*
 - b''. palear elongatum, lineare 5. *Aburria.*
- b. gulæ palear nullum.
 - a'. gula plumosa: remiges externi excisi 6. *Chamæpetcs.*
 - b'. gula nuda, linea media setosa: remiges externi integri. 7. *Ortalida.*

Genus 1. STEGNOLÆMA*, gen. nov.

Characteres Penelopes, sed gula summa omnino plumosa, spatio solum in gula inferiore denudato diversa.

STEGNOLÆMA MONTAGNII.

Ortalida montagnii, Bp. C. R. xlii. p. 875 (1856); Reich. Taub. p. 147; Scl. P. Z. S. 1857, p. 19; 1858, pp. 76, 556; 1860, pp. 63, 72.

Supra olivaceo-brunnea, purpureo subinduta, pileo obscuriore, capitis plumis albo anguste marginatis: dorso inferiore ferrugineo: subtus olivacea, plumis albo marginatis, lateribus et ventre imo ferrugineo perfusis: rostro obscure aurantiaco, pedibus corylinis: long. tota 20, alæ 10·2, caudæ 9·5, tarsi 2·5.

Hab. Int. New Granada; Ecuador, Rio Napo (*Verreaux*); Matos, Chillanes, Nanegal et Puellaro (*Fraser*).

Mus. Brit., S.-G.

Genus 2. PENELOPE.

Penelope, Merrem, Av. Ic. et Descr. ii. p. 40 (1786) Type. *P. cristata.*
Salpiza, Wagler, Isis, p. 1226 (1832) *P. pileata.*

* στεγνόν, tegmen, et λαίμωδ, gula.

Clavis specierum.

- a. cauda fascia terminali nulla.
 - a'. secundariis unicoloribus, immarginatis.
 - a''. abdomine æneo-viridi.
 - a'''. pileo immaculato, unicolori.
 - { maxima..... 1. *purpurascens.*
 - { media 2. *marail.*
 - { minor 3. *greeyi.*
 - b'''. pileo albo variegato.
 - a'''''. superciliis albis, infra nigro marginatis 4. *jacucaca.*
 - b'''''. superciliis distinctis nullis
 - { major, magis viridescens 5. *jacupeba.*
 - { minor et obscurior 6. *obscura.*
 - b''. abdomine summo æneo, imo rufo.
 - a'''''. genis unicoloribus immarginatis
 - { major : uropygio ferrugineo..... 7. *cristata.*
 - { minor : uropygio fuscescente 8. *boliviana.*
 - b'''''. genis argenteo marginatis..... 9. *sclateri.*
 - c''. abdomine toto castaneo
 - { pileo albo 10. *pileata.*
 - { pileo rufescente 11. *ochrogastra.*
 - b'. secundariis extus rufo marginatis 12. *superciliaris.*
 - b. cauda fascia terminali cinnamomea 13. *argyrotis.*

1. PENELOPE PURPURASCENS.

Penelope purpurascens, Wagl. Isis, 1830, p. 1110; Moore, P. Z. S. 1859, p. 61; Sclater, P. Z. S. 1859, pp. 369, 391; Sclat. et Salv. Ibis, 1859, p. 223; G. R. Gray, List of Gallinæ, p. 6.

Salpiza purpurascens, Wagl. Isis, 1832, p. 1226.

Æneo-olivacea: dorsi superioris, alarum tectricum et corporis subtus ad medium ventrem plumis albo marginatis: long. tota 35, alæ 15·5, caudæ 15·5, tarsi 4.

Hab. Mexico, Mazatlan (*Bischoff in Mus. Smiths.*); Tonila (*Xantus*); Oaxaca (*Boucard*); Jalapa (*De Oca*); Guatemala, Vera Paz, and Pacific Slope (*Salvin*); Honduras (*Dyson*).

Mus. Brit., Smithson., S.-G.

This is the only species of *Penelope* we have seen from any part of America north of Nicaragua. In Costa Rica and Panama it is replaced by *P. cristata*, which is easily distinguished by its deep rufous uropygium and lower belly.

2. PENELOPE MARAIL.

Faisan verdâtre de Cayenne, Buff. Pl. Enl. 338.

Penelope jacupema, Merrem, Av. Ic. et Descr. ii. p. 41, tab. xi. (?)

Penelope marail, Gmel. S. N. i. 734; Wagler, Isis, 1830, p. 1110; Temm. Fig. et Gall. iii. p. 56 et p. 692; G. R. Gray, List of Gall. p. 6.

Salpiza marail, Wagl. Isis, 1832, p. 1226; Cab. in Schomb. Guian. iii. p. 745.

Penelope purpurascens, J. E. Gray, Knowsl. Menag. t. 11.

Obscure viridescenti-anea: cervicis supremæ et corporis subtus

ad medium pectus plumis albo marginatis: ventre imo paulum fuscescentiore: long. tota 30, alæ 12·5, caudæ 14, tarsi 3·2.

Hab. British Guiana.

Mus. Brit.

P. marail, though resembling the previous species, is readily distinguishable by its smaller size and darker colour, and by the absence of white markings on the upper portion of the back. Its range seems strictly confined to the Guianas.

It must always remain doubtful what species Merrem's *Penelope jacupema* was intended for; but his description seems more applicable to the present bird than to *P. cristata*, to which it is sometimes referred.

3. PENELOPE GREEYI.

Penelope greeyi, G. R. Gray, P. Z. S. 1866, p. 266, t. xxii.

Penelope cristata, Pelzeln, Orn. Bras. p. 280 (?).

Similis precedenti, sed crassitie minore, et colore supra viridi magis purpurascente, forsan diversa: long. tota 24, alæ 11, caudæ 10·5, tarsi 2·4.

Hab. Santa Martha, New Granada.

Mus. Brit.

This seems to be a small form of the preceding species. Besides the type specimen described by Mr. Gray, we have only seen two other examples, which are now living in the Society's Gardens.

If Herr v. Pelzeln's *P. cristata* be not referable to the present species it must belong to one which we have not yet come across.

4. PENELOPE JACUCACA.

Penelope jacucaca, Spix, Av. Bras. ii. t. 69, p. 53; Wagler, Isis, 1830, p. 1110.

Salpiza jacucaca, Wagl. Isis, 1832, p. 1226; Cab. in Schomb. Guian. iii. p. 745.

Penelope superciliaris, J. E. Gray, Knowsl. Menag. ii. pl. 8.

Fuliginoso-nigricans, æneo nitens: tectricibus, plumis sincipitis, juguli, pectoris et epigastrii albo marginatis; vitta superciliari nivea, inferius atro marginata: aurium plumis nigris albo variolosis: long. tota 30, alæ 13. (Wagler.)

Hab. Brazil, prov. Bahia (*Spix*); British Guiana (*Schomb.*).

Mus. Derb.

Of this Guan we have only yet met with three specimens, now living in the Society's Gardens. They were purchased of a dealer in Liverpool on the 9th of February last, and were in very bad plumage when received, though now gradually recovering. We have little hesitation in referring them to Spix's species, when explained by Wagler's diagnosis, which we have adopted in the absence of specimens for complete examination.

The "Eyebrowed Guan" of the Knowsley Menagerie is referable to this species, though coloured too rufescent in tint. We have examined the typical specimen now in the Derby Museum at Liverpool.

This species is included by Schomburgk in his 'Fauna of British Guiana;' but it is doubtful whether it really occurs so far north.

5. PENELOPE JACUPEBA.

Penelope jacupeba, Spix, Av. Bras. ii. p. 54, t. 71.

Penelope nigricapilla, Pelzeln, Orn. Bras. pp. 281, 341 (nec G. R. Gray).

Penelope jacucaca, Gray, List of Gall. p. 8 (nec Spix).

Aneo-viridis: dorso inferiore et abdomine toto cupreo perfuso : dorsi superioris, alarum tectricum et corporis subtus ad inum pectus plumis albo utrinque marginatis : frontis et superciliarum plumis argenteo marginatis : long. tota 30, alæ 13·5, caudæ 12·5, tarsi 3·3.

Hab. Brazil, prov. San Paulo (*Natt.*); Rio (*Mus. S.-G.*); Pará (*Spix*).

Mus. Brit., Vindob., S.-G.

Our characters of this species are from one of the specimens obtained by Natterer at Ytararé, and named by Herr v. Pelzeln *P. nigricapilla*. It is not, however, Mr. Gray's *P. nigricapilla*, but agrees perfectly with the specimen in the British Museum referred to *P. jacucaca* of Spix. At first we were inclined to accede to the latter determination, but have recently convinced ourselves that Spix's figure and description of *P. jacucaca* are more satisfactorily applicable to another bird, of which we have given an account above, and which is distinguishable from the present species by its smaller size and by the well-defined white superciliary band, bordered (as Wagler expressly states) by black below. On the other hand, Spix's figure and description of *P. jacupeba* are fairly applicable to the present bird, except as regards its larger size. But a second skin of an immature example in the collection of Salvin and Godman is considerably smaller than the Nattererian specimen above described, and seems to answer to Spix's bird in every respect; so that if we assume that Spix's type was also not adult (which his figure would seem to indicate), we have a name provided for this species.

We may remark that Mr. G. R. Gray agrees with us in referring Spix's *P. jacupeba* to the present species, though in our opinion he has wrongly associated it with *P. jacucaca* of the same author.

Penelope jacupeba, as thus identified, is a fine large species of a general bronzy-green colour, which is somewhat tinged with rufescent on the rump and tail-coverts and still more so on the belly. The feathers of the whole top of the head are more or less edged with silvery grey, particularly on the front and over the eyes, but not so as to constitute a well-defined superciliary stripe; the ear-coverts are black. The characteristic white edgings which are found in all the group are well-defined in this species on the upper back, wing-coverts, neck, and breast. The outer primaries are attenuated as in other species of this genus; the fifth, sixth, and seventh are about equal and longest. The nearest ally of *P. jacupeba* is *P. obscura*,

from which it is mainly distinguishable by its larger size and generally greener and lighter colour.

6. PENELOPE OBSCURA.

El Yacúhú, Azara, Apunt. iii. p. 72. no. 335.

Penelope obscura, Temminck, Fig. et Gall. iii. p. 68, et p. 693; Vieill. Nouv. Dict. xxxvi. p. 343, et Enc. Méth. 361; Wagler, Isis, 1830, p. 1111.

Penelope nigricapilla, G. R. Gray, P. Z. S. 1860, p. 269; List of Gall. p. 7; Reichenb. Tauben, p. 152.

Penelope bridgesi, G. R. Gray, P. Z. S. 1860, p. 270; List of Gall. p. 7; Reichenb. Handb. Tauben, p. 151.

*Obscure æneo-viridis: dorso inferiore et abdomine toto chocola-
tino-brunneis: dorsi superioris, tectricum alarium et corporis
subtus ad medium ventrem plumis albo marginatis: pilei antici
plumis argenteo anguste marginatis: long. tota 25, alæ 11·5,
caudæ 12, tarsi 3.*

Hab. Paraguay (*Azara*); Rio Vermejo et Rio Paraguay (*Page*); Bolivia (*Bridges*).

Mus. Brit., Smiths. et S.-G.

The examination of four skins of this Guan obtained by Capt. T. J. Page during his expeditions up the Parana and its confluent in the United-States steamer 'Waterwitch,' and now in the Smithsonian Collection, have enabled us to identify it with Azara's *Yacúhú*, which has hitherto remained unrecognized. Not only does the bird agree sufficiently well with Azara's description, but one of Capt. Page's specimens bears a label with "Pavo del Monte" written on it, the provincial name, according to Azara, of his *Yacúhú*. It follows, therefore, that we must use for this bird the name *obscura*, founded by Temminck upon Azara's description.

Upon comparing the above-mentioned birds with the types of *Penelope bridgesi* and *P. nigricapilla* in the British Museum we have no doubt of their identity. The latter has but faint traces of white markings on the head; but two of Capt. Page's specimens, which we consider not quite mature, have likewise but very slight indications of this feature. Having thus had the advantage of examining six specimens of this Guan at one time, we see that considerable variation is shown in the extent of the white markings on the feathers of the head, a character upon the constancy of which Mr. Gray seems to have depended too much when differentiating his *P. nigricapilla* and *P. bridgesi*.

7. PENELOPE CRISTATA.

Meleagris cristata, Linn. S. N. i. p. 269 (?).

Penelope cristata, Lath. Ind. Orn. ii. p. 619; Temm. Fig. et Gall. iii. p. 46 et p. 691; Wagler, Isis, 1830, p. 1110; Burm. Syst. Ueb. iii. p. 339.

Salpiza cristata, Wagl. Isis, 1832, p. 1226; Cab. in Schomb. Guian. iii. p. 745.

Penelope purpurascens, Lawr. Ann. Lyc. N. Y. viii. p. 12.

Penelope brasiliensis, Bp. C. R. xlii. p. 877.

Penelope jacuaca, Salvin, Ibis, 1869, p. 317.

The Guan, Bennett, Gardens & Men. Z. S. ii. p. 131.

Aneo-iridis, pileo obscuriore : dorso imo et ventre toto cum crisso castaneis : corporis subtus plumis albo marginatis : long. tota 35, alæ 14·5, caudæ 15, tarsi 3·5.

Hab. Costa Rica (*Carmioli*); Panama (*M'Cleannan*); New Granada (*Mus. S.-G.*); British Guiana (*Schomb.*).

Mus. Brit., S.-G.

Whatever the *Meleagris cristata* of Linnæus may have been intended for, there seems to be little doubt that the *Penelope cristata* of Latham, Temminck, and Wagler refers to this species, which is readily known by its large size (almost equal to that of *P. purpurascens*) and the deep chestnut of the lower back and belly.

Mr. Gray considers *P. jacuacu* of Spix referable to the present species; but it seems to us that it is much more reasonable to refer Spix's figure and description to the next, similar but smaller species, which is from the very country where Spix discovered it.

We have examined specimens of this bird from Costa Rica, Panama, and New Granada; we have not yet met with Guianan examples, and it is possible that they may belong to the next species.

8. PENELOPE BOLIVIANA.

Penelope jacuacu, Spix, Av. Bras. ii. p. 52, t. 68 (?).

Penelope boliviana, Reich. Taub. p. 151; Bp. C. R. xlii. p. 877; G. R. Gray, List of Gall. p. 7 (1867); Pelz. Orn. Bras. pp. 282, 339.

Penelope rufescens, Natt. MS.

Supra aneo-iridis: dorsi superioris et tectricum alarum plumis albo marginatis, dorso inferiore fusciscente : subtus, præcipue in ventre, rufescens; cervicis et pectoris plumis albo marginatis : long. tota 26, alæ 12·3, caudæ 13, tarsi 3·4.

Hab. Solimoens (*Spix*); Rio Madeira et Lake Manaqueri, Upper Amazon (*Natterer*); Yurimaguas (*E. Bartlett*); Rio Huallaga (*Pöppig*).

Mus. Brit., Vindob., S. & G.

This Guan most nearly resembles the large species we have called *P. cristata*, but is distinguishable by its smaller size, by the lower back being only slightly rufescent instead of deep chestnut, by the well-defined white edgings of the feathers of the upper back (which are almost, if not quite, absent in *P. cristata*), and by the rufescent colour below extending over the lower surface of the breast, though with a more subdued tint.

Our description is taken from one of Natterer's Amazonian specimens, which agrees with the bird called *P. boliviana* in the British Museum, and with Mr. Bartlett's skin from Yurimaguas.

There is a living example of this bird now in the Society's Gardens.

9. PENELOPE SCLATERI.

Penelope sclateri, G. R. Gray, P. Z. S. 1860, p. 270; List of Gall. p. 7; Reichenb. Columb. p. 181.

Supra fuscescenti-ænea, dorso postico sordide rufescente: pilei antici, superciliarum et genarum plumis argenteo limbatis: dorso superiore et alis extus albo parce flammulatis: subtus magis brunnescens, pectore albo flammulato: ventre toto crissoque saturate rufis: long. tota 22, alæ 10·2, caudæ 9·8, tarsi 2·35.

Hab. Bolivia (*Bridges*).

Mus. Brit., *Derb.*

With this Guan we are only acquainted from inspection of the typical specimens in the National Collection. It seems to be a well-marked species, easily recognizable by the silvery white edgings of its superciliaries and cheeks. In other respects it is somewhat like *Stegnolæma montagnii*, but has the whole throat nude.

10. PENELOPE PILEATA.

Penelope pileata, Wagl. Isis, 1830, p. 1110; G. R. Gray, List of Gall. p. 7; Pelz. Orn. Bras. pp. 282, 340; Des Murs, Icon. Orn. t. 23.

Pipile pileata, Reichenb. Columb. p. 153.

Salpiza pileata, Wagl. Isis, 1832, p. 1226; J. E. Gray, Knowsl. Menag. t. 9.

Obscure æneo-viridis; pileo albo, postice rufescente; genis et linea superciliari nigris: interscapulii et tectricum alarium plumis albo marginatis: collo undique et corpore subtus castaneis: ventre albo flammulato: long. tota 29, alæ 12, caudæ 13, tarsi 3·2.

Hab. Amazonia: vic. of Pará (*Wagler*); Rio Madeira and Rio Vautá (*Natterer*).

Mus. Brit., *Vindob.*, S. & G.

11. PENELOPE OCHROGASTER.

Penelope ochrogaster, Pelz. Orn. Bras. pp. 282, 337.

Supra obscure fusca, uropygium versus rufescens; dorsi superioris et tectricum alarum plumis albo marginatis: pileo rufescente, frontis et superciliarum plumis albo marginatis: linea superciliari et genis nigris: subtus castanea, usque ad medium ventrem albo flammulata: long. tota 29, alæ 13·5, caudæ 14·5, tarsi 3·5.

Hab. Brasil. int. near Cuyaba (*Natt.*).

Mus. *Vindob.*, S. & G.

Obs. Species a præcedente simili pileo rufescente et cervice postice minime castanea distinguenda.

12. PENELOPE SUPERCILIARIS.

Penelope superciliaris, Temm. Fig. et Gall. iii. p. 72 et p. 693 (1815); Wagl. Isis, 1830, p. 1110; Max. Beitr. iv. p. 539; Burm. Syst. Ueb. iii. p. 337; Gray, List of Gall. p. 7; Pelz. Orn. Bras. p. 282.

Salpiza superciliaris, Wagl. Isis, 1832, p. 1226.

Penelope jacupemba, Spix, Av. Bras. ii. p. 55, t. 72.

Supra æneo-viridis, superciliis angustis albis: secundariorum uropygii et caudæ tectricum plumis rufo marginatis: subtus magis cinerea, plumis usque ad medium ventrem albo marginatis: ventre imo et crisso rufescentibus: long. tota 26, alæ 9·8, caudæ 10·8, tarsi 2·7.

Hab. Wood-region of S.E. Brazil (*Max. et Burm.*); vic. of Bahia (*Wucherer*); provinces of Rio and San Paulo (*Natt.*).

Mus. Brit., Vindob., Smithson., S. & G.

The rufous edgings to the secondary wing-feathers render this Guan readily recognizable. The superciliary stripe, although distinct, is not so broad as in *P. jacucaca*, nor does it extend across the forehead as in the latter species.

There are several examples of this bird now living in the Society's Gardens.

13. PENELOPE ARGYROTIS.

Pipile argyrotis, Bp. C. R. xlii. p. 875 (1856).

Penelope montana, Licht. in Mus. Berol. (Nomencl. p. 86); Bp. C. R. xlii. p. 877 (descr. nulla); Reichenb. Tauben, p. 151.

Penelope lichtensteinii, G. R. Gray, P. Z. S. 1860, p. 269; et List Gall. p. 7 (1867).

Fuscescenti-æneo-viridis: dorsi superioris, alarum tectricum et corporis subtus plumis albo marginatis: uropygio et ventre imo cum lateribus rufescentibus: pileo cuprescenti-æneo, frontis, superciliarum et genarum plumis albo marginatis: caudæ reatricibus lateralibus æneo-nigris, fascia apicali pollicari cinnamomea terminatis, mediis rufescentibus apicem versus cinnamomeis: long. tota 25, alæ 11, caudæ 11, tarsi 2·3.

Hab. Venezuela, S. Martha (*Verreaux*); Caraccas (*Mus. Paris.*); Int. of New Granada, Bogotá (*Mus. S.-G.*).

Mus. Brit., Paris., S. & G.

Sclater has examined two skins of this Guan in the Paris Museum, which are marked *Pipile argyrotis* in Bonaparte's own handwriting, and has thus determined the species to which the term is referable. This could hardly have been even guessed at from the fragment of description attached to the name in the 'Comptes Rendus.'

The distinct and peculiar terminal tail-band at once distinguishes this *Penelope* from all its congeners.

Genus 3. PENELOPINA.

Penelopina, Reichenb. Columb. p. 152 Type.
P. nigra.

PENELOPINA NIGRA.

Penelope nigra, Fraser, P. Z. S. 1850, p. 246, pl. 29; Sclat. et Salv. Ibis, 1859, p. 224; Salv. P. Z. S. 1867, p. 160.

Penelopina nigra, Reichenb. Tauben, p. 152.

Purpurascenti-nigra unicolor, subtus in ventre magis obscura : rostro et cum pedibus gula nuda rubris : long. tota 24, alæ 9·5, caudæ 10·5, tarsi 2·8.

Fem. *nigra, rufo frequentissime vermiculata : pectore fere immaculato.*

Hab. Guatemala, Vera Paz, and Volcanoes of Agua and Fuego (Salvin).

Mus. Brit., S.-G.

Genus 4. PIPILE.

	Type.
<i>Penelope</i> , Wagler, Isis, p. 1226 (1832)	<i>P. cumanensis</i> .
<i>Pipile</i> , Bp. C. R. xlii. p. 877 (1856)	<i>P. cumanensis</i> .

Clavis specierum.

a. Caruncula gulari cærulea	1. <i>P. cumanensis</i> .
b. Caruncula gulari rubra	
{ plaga alari alba	2. <i>P. jacutinga</i> .
{ alis nigris, albo striatis	3. <i>P. cujubi</i> .

1. PIPILE CUMANENSIS.

Crax cumanensis, Jacquin, Beytr. t. 10, p. 25 (1784).

Crax pipile, Jacquin, ibid. t. 11, p. 26.

Penelope cumanensis, Gm. S. N. i. p. 734; Wagl. Isis, 1830, p. 1109; Léotaud, Ois. de Trin. p. 383; Pelzeln, Sitz. Ak. Wien, xxxi. p. 330.

Penelope pipile, Temm. Fig. et Gall. iii. p. 76 et p. 694; Cab. in Schomb. Guian. iii. p. 745; Gray, Knowsley Menag. ii. t. 10; Sclater, P. Z. S. 1855, p. 163, 1858, p. 76.

Pipile cumanensis, Bp. C. R. xlii. p. 877; Reichenb. Tauben, p. 154; Sclat. et Salv. P. Z. S. 1859, p. 598.

Pipile nattereri, Reichenb. Tauben, p. 154.

Penelope nattereri, Pelzeln, Orn. Bras. p. 283.

Penelope jacquinii, G. R. Gray, List of Gallinæ, p. 8.

Penelope grayi, Pelzeln, Orn. Bras. p. 284.

Nigra, aeneo-nitens : pileo toto cum fronte albis, scapis plumarum angustissime nigris : tectricum alarium et pectoris plumarum marginibus cum plaga magna alari albis : genis omnino nudis et cum caruncula gulari cæruleis : long. tota 27, alæ 13, caudæ 11, tarsi 2·5.

Hab. British Guiana (Schomb.); Venezuela (*Beauperthuy in Mus. Par.*); Trinidad (*Léotaud*); Bogotá (*Mus. S.-G.*); Mato-Grosso, Upper Amazon, and Rio Negro (*Natt.*); Eastern Peru, Cosnipata valley (*Whitely*); Bolivia (*D'Orb. in Mus. Par.*); Rio Napo (*Verreaux*).

Mus. Brit., Paris., Vindob., S.-G.

The specimen in the British Museum distinguished by Mr. Gray as *P. jacquinii* (said to be from Peru) seems to us to be hardly separable from the present species. The shafts of the head-feathers are dark, and more distinctly marked; the white of the head extends rather further down the neck, and there is rather more white on the larger wing-coverts, than in the specimens assigned in the British

Museum to *P. cumanensis*; but in other respects the examples of the two supposed species agree.

Von Pelzeln has named two Nattererian specimens of *Pipile* from Mato Grosso (Orn. Bras. p. 284) *Penelope grayi*, supposing them to be the *P. jacquinii* of Gray (nec Reichenbach), but does not explain how they differ from his *P. nattereri*, i. e. *P. cumanensis*.

2. PIPILE JACUTINGA.

Penelope pipile, var. *a*, Temm. Fig. et Gall. iii. p. 76, et p. 69.

Penelope jacutinga, Spix, Av. Bras. ii. p. 53, t. 70 (1825); Gray, List of Gallinæ, p. 8; Pelzeln, Orn. Bras. p. 283.

Penelope leucoptera, Max. Reise, i. p. 139, ii. p. 110; Beitr. iv. p. 544.

Penelope pipile, Wagl. Isis, 1830, p. 1109; Burm. Syst. Ueb. iii. p. 336; Pelzeln, Sitzungsab. Ak. Wien, xxxi. p. 329.

Penelope nigrifrons, Less. Tr. d'Orn. p. 482.

Pipile leucolophos, Bp. Compt. Rend. xlii. p. 877; Reichenb. Tauben, p. 152.

Pipile nigrifrons, Bp. C. R. xlii. p. 877.

Yacu-apeti, Azara, Apunt. iii. p. 80.

Nigra purpureo-nitens: fronte nigra: pileo cum nucha albo, scapis plumarum anguste nigris: plaga alari maxima et cervicis subtus pectorisque plumarum marginibus albis: genis partim plumosis cæruleis: caruncula gulari rubra: long. tota 28, alæ 14, caudæ 12, tarsi 2·6.

Hab. Wood-region of S.E. Brazil (*Max. et Burm.*); San Paulo (*Natt.*); Paraguay (*Azara*).

Mus. Brit., Vindob., S.-G.

3. PIPILE CUJUBI.

Penelope kujubi, Pelzeln, Sitzungsab. Ak. Wien, xxxi. p. 329 (1858); Orn. Bras. p. 284.

Pipile kujubi, Reichenb. Tauben, p. 153.

Brunneo-nigra, nitore violaceo: pileo nigro, plumis albo marginatis; fronte alba, scapis plumarum nigris: tectricibus alarum albo striatis: caruncula gulari rubra: long. tota 26, alæ 12·5, caudæ 11, tarsi 2·3.

Hab. Pará (*Natt.*).

Mus. Brit., Vindob., Paris.

There is one specimen of this rare Guan in the British Museum and one in the Paris collection, both originally from birds living in captivity. The species may be immediately distinguished by the want of the conspicuous white wing-patch, which is replaced by narrow edgings to some of the wing-coverts.

Genus 5. ABURRIA.

Type.

Aburria, Reichenb. Av. S. N. p. xxvi (1859) .. *A. carunculata*.

ABURRIA CARUNCULATA.

Penelope aburri, Lesson, Dict. des Sci. Nat. lix. p. 191; Man. d'Orn. p. 482; ej. Compl. p. 426; Gray, List of Gall. p. 9.

Penelope carunculata, Temm. MS.

Aburria carunculata, Reichenb. Syst. Av. p. xxvi; Tauben, p. 141; Bp. C. R. xlii. p. 877; Sclater, P. Z. S. 1857, p. 19, et 1858, p. 76.

Nigra unicolor, œneo-viridescente induta: gula parce plumosa, caruncula longa vermiformi ornata: long. tota 29, alæ 13·5, caudæ 11·5, tarsi 2·8.

Fem. *Mari similis*.

Hab. Interior of New Granada; Valley of Cauca, and Mountains of Quindiu (*Goudot*); Rio Napo (*Verr.*).

Mus. Brit., S.-G.

Genus 6. CHAMÆPETES.

Type.

Chamæpetes, Wagler, Isis, 1832, p. 1227 *C. goudoti*.

Clavis specierum.

- | | |
|--|-------------------------|
| a. Fuscescenti-olivacea, abdomine castaneo | 1. <i>C. goudoti</i> . |
| b. Viridescenti-nigra, unicolor..... | 2. <i>C. unicolor</i> . |

1. CHAMÆPETES GOUDOTI.

Ortalida goudotii, Lesson, Man. d'Orn. ii. p. 217; Dict. d. Sc. Nat. lix. p. 195; Trait. d'Orn. p. 481; Compl. p. 442; Gray, List of Gall. p. 13.

Chamæpetes goudoti, Wagl. Isis, 1832, p. 1227; Reichenb. Tauben, p. 142.

Penelope rufiventris, Tsch. F. P. Aves, p. 291, t. xxxi.

Ortalida rufiventris, Sclater, P. Z. S. 1859, p. 147.

Fuscescenti-olivacea, œneo induta: subtus magis grisescens, abdomine toto castaneo: facie tota nuda, in ave viva cœrulea: pedibus rubris: long. tota 19, alæ 9·5, caudæ 10, tarsi 2·5.

Hab. New Granada; Mountains of Quindiu (*Goudot*); Ecuador, Pallatanga (*Fraser*); Andes of Peru, alt. 7200 ped. (*Tschudi*).

Mus. Brit., S.-G.

Sclater has examined the types of *Tschudi's Penelope rufiventris* in the Neuchatel collection, and is of opinion that, in spite of what *Tschudi* affirms, they are the same as *Ortalida goudoti*.

2. CHAMÆPETES UNICOLOR.

Chamæpetes unicolor, Salv. P. Z. S. 1867, p. 159; Lawr. Ann. N. Y. Lyc. ix. p. 139.

Nigra, viridescenti-nitens: abdomine paulo obscuriore: rostro nigro: pedibus rubris: long. tota 24, alæ 11, caudæ 11, tarsi 2·8.

Fem. *Mari similis*.

Hab. Veragua (*Arcé*); Costa Rica (*Carmioli*).

Mus. Brit., Smithson., S.-G.

Genus 7. ORTALIDA.

Type.

Ortalida, Merrem, Av. Ic. et Descr. ii. p. 40 (1786). *O. motmot*.

Penelops, Reichenb. Syst. Av. p. xxvi (1853) *O. albiventris*.

Clavis specierum.

- a. remigibus externis fuscis aut æneo-fuscis.
 a'. rectricum externarum apicibus castaneis.
 a''. pectore fere immaculato unicolori.
 a'''. rectr. ext. omnino castaneis
 { major, capite rufo 1. *motmot*.
 { minor, capite fuscescente 2. *araucuan*.
 b'''. rectr. ext. castaneo terminatis.
 a'''''. capite rufo 3. *ruficeps*.
 b'''''. capite fusco.
 a'''''''. abdomine late castaneo. 4. *wagleri*.
 b'''''''. abd. dilute rufescente
 { pectore cervino 5. *ruficauda*.
 { pectore cinereo 6. *canicollis*.
 b''. pectore albo variegato.
 c'''. pileo rufescente
 { ventre albo 7. *albiventris*.
 { ventre cinereo 8. *squamata*.
 d'''. pileo obscure cinereo.
 c'''''. superciliis nullis
 { major, pectoris plumis an-
 gust. marg. 9. *caracco*.
 { minor, pectoris plumis latius
 marg. 10. *guttata*.
 d'''''. superciliis albis 11. *superciliaris*.
 b'. rectricum externarum apicibus albis aut cervinis.
 c''. ventre cervino
 { major; cauda valde elongata 12. *poliocephala*.
 { minor; cauda mediocri 13. *vetula*.
 d''. ventre albo 14. *leucogastra*.
 b. remigibus externis castaneis.
 c'. rectricum externarum apicibus albidis
 { capite rufescente 15. *garrula*.
 { capite fuscescente 16. *cinereiceps*.
 d'. rectricum externarum apicibus castaneis 17. *erythroptera*.

1. ORTALIDA MOTMOT.

Phasianus motmot, Linn. S. N. i. p. 271; Gm. S. N. i. p. 740.

Faisan de la Guiane, Buff. Pl. Enl. 146.

Phasianus katraca, Bodd.

Phasianus parraka, Gm. S. N. i. p. 740.

Penelope parrakoua, Temm. Fig. et Gall. iii. p. 695; Burm. Syst. Ueb. iii. p. 341.

Phasianus parraqa, Lath. Ind. Orn. ii. p. 632.

Penelope motmot, Wagl. Isis, 1830, p. 1111.

Ortalda motmot, Wagl. Isis, 1832, p. 1227; Cab. in Schomb. Guian. iii. p. 744; Gray, List of Gallinæ, p. 10; Pelzeln, Orn. Bras. p. 285.

Supra æneo-fusca: alis extus caudæque rectricibus quatuor mediis magis æneis: capite toto rufo: subtus saturate grisea, ventre dilutiore: caudæ rectricibus externis castaneis: rostro plumbeo, apice flavicante: pedibus carneis: long. tota 23, alæ 8, caudæ 11, tarsi 2·8.

Hab. Cayenne (*Buffon*); Brit. Guiana (*Schomb.*); Rio Negro et Rio Branco (*Natt.*).

Mus. Brit., Berol., Vindob., et S.-G.

In one of our skins of this species from the Rio Negro (*Natt.*), the three outer pairs of rectrices are wholly chestnut down to the base; in a second (from Demerara) there are traces of bronzy green at the base.

2. ORTALIDA ARAUCUAN.

Penelope araucuan, Spix, Av. Bras. ii. t. 74.

Penelope araucuan, Spix, Av. Bras. ii. p. 56; Wagl. Isis, 1830, p. 1112.

Ortalida araucuan, Wagl. Isis, 1832, p. 1227; G. R. Gray, List of Gall. p. 11.

Ortalida superciliaris, Pelzeln, Orn. Bras. p. 285.

Supra æneo-fusca unicolor, pileo parum obscuriore: subtus saturate grisea, ventre medio dilutiore: reatricibus quatuor mediis æneis, ceteris castaneis, ad basin æneis: rostro plumbeo, apice flavicante, pedibus plumbeis: long. tota 16·5, alæ 7, caudæ 8, tarsi 1·9.

Hab. Lower Amazonia, prov. Maranhã (Spix); vicinity of Pará (*Natterer*).

Mus. Brit., Vindob., S.-G.

Obs. Similis præcedenti, sed crassitie minore et pileo obscuro nec rufo facile distinguenda.

This *Ortalida* must be carefully distinguished from *O. albiventris* of S.E. Brazil—a very different species, which has been called *O. araucuan* by Max. and Burmeister. *O. albiventris* is a larger bird, and has the head and uropygium bright rufous, and the belly white.

Natterer obtained examples of this bird at Pará, the Rio Muria, and Praia de Cajutaba. One of these is now in Salvin and Godman's collection. This species is probably the representative of *O. motmot* on the south bank of the Amazons.

3. ORTALIDA RUFICEPS.

Penelope ruficeps, Wagl. Isis, 1830, p. 111.

Ortalida ruficeps, Wagl. Isis, 1832, p. 1227.

Pileo ac nucha rufis: notæ toto olivaceo-fusco: pectore griseo-olivaceo: gastræo griseo: cristo fuscescente: reatricibus duabus mediis æneo-fuscis, sequente concolori, apice rufescente: reliquis prima medietate et ultra æneo-fuscis: dein cinnamomeo-rufis.

Adult. long. tota 16·25, caudæ 7·8.

Hab. Brazil.

Mus. Berol.

Obs. Similis *P. motmot* et *P. albiventris*: a prima statura minore, caudæ pictura &c., ab altera uropygii, pectoris, caudæ colore, statura minore &c., satis distincta. (*Wagler*.)

We have no examples of this *Ortalida*; but *Sclater* has examined the type in the Berlin Museum, and believes it to be a good species. We have copied *Wagler's* description of it. It appears to be most like *O. motmot*, but is much smaller, and has the basal portion of the outer tail-feathers æneous.

4. ORTALIDA WAGLERI.

Ortalida wagleri, G. R. Gray, List of Gall. p. 11 (1867).

Supra olivacea, pileo nigricanti-plumbeo: subtus cinereo-olivacea, abdomine, hypochondriis, tibiis et crisso intense rufis: rectricibus quatuor utrinque externis rufo terminatis, reliquis æneo-viridescentibus: long. tota 26.5, alæ 10, caudæ 12, tarsi 3.

Hab. Western Mexico, near Mazatlan (*Grayson*).

Mus. Brit., Paris., Smithson.

The bright red belly renders this fine species almost unmistakable, its nearest ally being the following, in which the abdomen is only slightly rufescent.

The only exact locality we have met with for this species is Mazatlan, in the vicinity of which Col. Grayson obtained two skins, now in the Smithsonian collection. His notes state that the iris is dark brown, the feet grey, the bare space round the eye red and blue, and the bare sides of the throat red.

5. ORTALIDA RUFICAUDA.

Ortalida ruficauda, Jard. Ann. N. H. xx. p. 374 (1847); et Contr. Orn. 1848, p. 16, t. 4.

Ortalida bronzina, G. R. Gray, List of Gall. p. 11 (1867).

Supra æneo-fusca, pileo fuscescenti-plumbeo: subtus ochracea, gutture et pectore æneo perfusis: subalaribus, hypochondriis et crisso castaneis: cauda æneo-viridi, rectricibus quinque externis castaneo terminatis: rostro plumbeo, apice flavicante; pedibus obscure carneis: long. tota 19, alæ 7.8, caudæ 9, tarsi 2.2.

Hab. Tobago (*Kirk*); Venezuela (*Mus. Berol. et Paris.*).

Mus. Brit., Berol., Paris., S.-G.

Two examples of this species in the Berlin Museum from Venezuela were formerly confounded with *O. poliocephala*. We have taken our description from one of Kirk's original specimens, kindly presented to us by Sir William Jardine. We have compared this with *O. bronzina*, and find them identical.

This *Ortalida* probably also occurs in Trinidad, but is not mentioned by M. Léotaud. Specimens in the Paris Museum, transmitted by M. Beuperthuy, have been likewise erroneously named *poliocephala*.

6. ORTALIDA CANICOLLIS.

Jacú caraguata, Azara, Apunt. iii. p. 77 (no. 336).

Penelope canicollis, Wagl. Isis, 1830, p. 1112.

Ortalida canicollis, Wagl. Isis, 1832, p. 1227; Hartlaub, Ind. Az. p. 22; Pelzeln, Orn. Bras. p. 286.

Supra æneo-fusca, pileo cinereo: subtus magis ochracea, gutture et pectore æneo perfusis et hoc præcipue griseo subobsolete punctatis: subalaribus, hypochondriis et crisso castaneis: cauda æneo-viridi, rectricibus quinque externis castaneo late terminatis: rostro flavicante; pedibus pallide corylinis: long. tota 22, alæ 9.8, caudæ 10.3, tarsi 2.5.

Hab. Paraguay (*Azara*); Rio Parana et R. Vermejo (*Page*); Villa Maria, Upper Paraguay (*Natterer*).

Mus. Vindob., Paris., et Smithsoniano.

Obs. Similis *O. ruficaudæ*, sed pileo pallidior cinereo, gutture variegato, et caudæ apicibus latius castaneis distinguenda.

We have had some difficulty in finding trustworthy characters whereby to distinguish this species, of which Herr von Pelzeln has lent us a specimen from the Imperial Cabinet of Vienna, from *O. ruficauda* of Venezuela. The two birds are very nearly related; but so far as we can see the points of distinction pointed out above can be relied on. The specimens belonging to the Smithsonian Institution, which have also been forwarded to us for comparison, and which were collected on the banks of the rivers Parana and Vermejo by Capt. Page, are decidedly smaller in all their dimensions than the Nattererian example, but do not otherwise differ.

Sclater has examined two skins in the Paris Museum apparently of this species. One of these, collected by D'Orbigny, has no locality attached to it; the other was obtained by MM. Castelnau and Deville on the Rio Paraguay.

7. ORTALIDA ALBIVENTRIS.

Penelope albiventris, Wagl. Isis, 1830, p. 1111.

Ortalida albiventris, Wagl. Isis, 1832, p. 1227; G. R. Gray, List of Gall. p. 12.

Ortalida araucuan, Pelzeln, Orn. Bras. p. 285.

Penelope araucuan, Max. Beitr. iv. p. 549; Burm. Syst. Ueb. iii. p. 340.

Supra æneo-viridis: pileo et uropygio rufis: subtus dilutior, gutturis et pectoris plumis albo guttatis: ventre toto pure albo: crisso fulvescente: subalaribus rufis: cauda æneo-viridi, rectricibus tribus externis castaneo late terminatis: rostro nigricanti-plumbeo, apice albo, pedibus plumbeis: long. tota 19, alæ 7, caudæ 8·5, tarsi 2·3.

Hab. S.E. Brazil; Bahia (*Wucherer*); Minas Geraës (*Burm.*).

Mus. Brit., Vindob., S.-G.

This species seems to be confined to the vicinity of Bahia and the adjoining parts of Minas. Pr. Max. tells us it is not found south of the Rio Doce. It is easily distinguished by its pure white belly, and red head and lower back. Pr. Max. and Burmeister have called it *O. araucuan*; and Spix perhaps united the two species in his description, though his figure clearly refers to the bird to which we have retained his name.

8. ORTALIDA SQUAMATA.

Ortalida squamata, Less. Diet. des Sc. Nat. lix. p. 195; Trait. d'Orn. p. 481; Compl. de Buff. p. 443; G. R. Gray, List of Gall. p. 10.

Supra brunnescenti-æneo-viridis: pileo et uropygio rufis: subtus dilutior, ventre griseo, gutturis et pectoris plumis albescente strictè marginatis; hypochondriis et crisso rufescentibus; cauda æneo-

viridi, rectricibus tribus externis castaneo late terminatis: rostro plumbeo flavicante terminato, pedibus pallide corylinis: long. tota 20, alæ 8·1, caudæ 10, tarsi 2·5.

Hab. Brazil, prov. Sta Catherina (?) (*Wells in Mus. Smiths.*).
Mus. Brit., Smithson.

The bird we have described above appears to be very closely allied to *O. albiventris*, which it probably represents in the more southern portion of Brazil. Mr. G. R. Gray having named the single specimen in the British Museum "*O. squamata*, Lesson," we have followed his determination, although Lesson's description is, as usual, short and vague, and would be equally applicable to more than one other member of the genus. Our characters of this species are taken from a skin belonging to the Smithsonian Institution, which was collected in Brazil by Mr. Lemuel Wells, probably in the province of Santa Catarina.

9. ORTALIDA CARACCO.

Penelope, sp., Poepig, *Froriep's Notiz*. 1831, no. 681, Beil, p. 8.

Ortalia caracco, Wagl. *Isis*, 1832, p. 1111.

Ortalia adspersa, G. R. Gray, *List of Gall.* p. 13.

Saturate æneo-viridis, fronte albescente: uropygio paulum rufescente tincto: subtus dilutior, gutturi et pectoris plumis stricte albo marginatis, abdomine grisescenti-æneo, hypochondriis et crisso rufescentibus: rectricibus externis castaneis: cæteris æneo-viridibus: rostro plumbeo, apice albicante; pedibus fuscis: long. tota 22, alæ 9, caudæ 10, tarsi 2·5.

Hab. New Granada (*Mus. Vindob.*), Upper Amazonia (*Poepig*).
Mus. Brit., Vindob., S.-G.

Similis *O. guttata*, sed crassitie majore, fronte albicante, et cervicis plumarum marginibus angustius albis distinguenda.

We have a single specimen of this bird, received in exchange from the Vienna Museum, under the name we have adopted for it. It is labelled "*Bogotá, Boissoneau*." There is a single skin in the British Museum well agreeing with it, which Mr. Gray has called *Ortalia adspersa*; but having one of Tschudi's type specimens of *O. adspersa*, we have been enabled to decide that this name is merely a synonym of *O. guttata*.

10. ORTALIDA GUTTATA.

Penelope guttata, Spix, *Av. Bras.* ii. p. 55, t. 73; Wagl. *Isis*, 1830, p. 1112; *Burm. Syst. Ueb.* iii. p. 341.

Ortalia guttata, Wagl. *Isis*, 1832, p. 1227; Sclater, *P. Z. S.* 1858, p. 76; *Scl. et Salv. P. Z. S.* 1869, p. 598.

Ortalia adspersa, Tsch. *Wieg. Arch.* 1843, p. 363; *Faun. Per. Aves*, p. 290.

Ortalia albiventris, Pelz. *Orn. Bras.* p. 286.

Penelope maculata, *Natt. MS.*

Supra æneo-viridis, pileo nigricantiore: uropygio toto rufescente: subtus gutturi et cervicis plumis grisescenti-albido guttatis: ventre

pallide grisescenti-viridi, hypochondriis et crisso rufescentibus: cauda æneo-viridi, reatricibus externis pro majore parte castaneis: rostro plumbeo apice albicante, pedibus corylinis: long. tota 25, alæ 8·5, caudæ 9·5, tarsi 2·5.

Hab. Upper Amazon (*Spix*); Bogotá (*Mus. S.-G.*); Rio Napo (*Verreaux*); wood-region of Eastern Peru (*Tschudi*); Cosnipata valley (*Whitely*); Bolivia (*Bridges in Mus. Brit.*); Mato Grosso and Rio Madeira (*Natterer*).

Mus. Brit., Vindob., Smithson., et S.-G.

We have a typical example of *Tschudi's Ortalida adspersa*, received in exchange from Neuchâtel, and have seen a second (from the same source) in the Smithsonian collection. We regard them as clearly referable to *Spix's O. guttata*. We have also before us one of the *Nattererian* skins called *O. albiventris* by v. Pelzeln, which is certainly the same bird.

The range of this Guan is therefore widely extended throughout Upper Amazonia from Mato Grosso to the slopes of the Andes of New Granada, where it comes within the grasp of the Bogotá bird-hunters.

11. ORTALIDA SUPERCILIARIS.

Ortalida superciliaris, G. R. Gray, List of Gall. p. 10.

Æneo-viridis, fronte et superciliis albescentibus; subtus magis brunnescenti-olivacea, cervicis et pectoris plumis albo marginatis: abdomine grisescente, hypochondriis et crisso rufescentibus: long. tota 16·9, alæ 7, tarsi 1·9.

Hab. South America.

Mus. Brit., Derbiano.

The typical specimen of this bird, now in the British Museum, died in this Society's Gardens, and its locality is unknown. There is a specimen in the Derby Museum which we consider referable to the same species. It was purchased from Mr. Gould in 1846.

This is a small species, of about the same size as *O. araucuan*, but distinguishable from that bird by its white eyebrows and spotted breast. We have some little suspicion that it may be a dwarfed variety of *O. guttata*.

12. ORTALIDA POLIOCEPHALA.

Penelope poliocephala, Wagl. Isis, 1830, p. 1112.

Ortalida poliocephala, Wagl. Isis, 1832, p. 1227; Scl. & Salv. P. Z. S. 1869, p. 364.

Fuscescenti-olivacea, capite plumbeo: subtus dilutior, gulæ plumis obscurioribus sed griseo notatis: ventre medio lactescenti-albo, hypochondriis et crisso ferrugineo perfusis: cauda æneo-viridi, reatricibus quinque lateralibus cervino late terminatis: long. tota 24, alæ 10·5, caudæ 11·5, tarsi 3·2.

Hab. Tableland of Mexico, Real Arriba and State of Vera Cruz (*Deppe*); vicinity of the city of Mexico (*le Strange*); Rio Armeria and Rio Tupila (*Xantus*).

We were much puzzled as to the difference between this species and *O. vetula* until we had examined the specimens already recorded as having been obtained by Mr. le Strange in the vicinity of Mexico; and our American friends appear to have been in equal perplexity upon the subject. But upon comparison of examples of the two species all doubt vanishes, and the accuracy of Wagler's views becomes at once apparent. The present bird is at once distinguishable from *O. vetula* by its larger size, its white belly, and especially by its very long tail.

The Smithsonian collection contains two examples of this species, obtained by Xantus on the Rio de la Armeria and Tupila River in 1863.

13. ORTALIDA VETULA*.

Penelope vetula, Wagl. Isis, 1830, p. 1112.

Ortalitya vetula, Wagl. Isis, 1832, p. 1227; Lawr. Ann. Lyc. N. Y. v. p. 116; Sclater, P. Z. S. 1859, p. 391; Moore, P. Z. S. 1859, p. 62; Scl. et Salv. Ibis, 1859, p. 224; Taylor, Ibis, 1860, p. 311.

Ortalitya poliocephala, Cassin, Illustr. p. 267, t. 44; Sclater, P. Z. S. 1856, p. 310.

Ortalitya maccalli, Baird, B. N. A. p. 611; Lawr. Ann. Lyc. N. Y. ix. p. 209; Dresser, Ibis, 1866, p. 24.

Ortalitya plumbeiceps, Gray, List of Gallinæ, p. 11.

Fuscescenti-olivacea: capite plumbeo: subtus dilutior, ventre medio ochraceo aut rufescente tincto: cauda cæneo-viridi, rectricibus quinque lateralibus albo aut cervino terminatis: long. tota 21, alæ 7·7, caudæ 9·0, tarsi 2·5.

Hab. Texas, on the Rio Grande (*M'Cull & Dresser*); State of Vera Cruz (*Sallé, Boucard*); Yucatan, near Merida (*Schott*); Guatemala, Vera Paz (*Salvin*); Honduras (*Leyland*).

Mus. Brit., Paris., Berol., Smiths., S.-G.

We have examined a large series of specimens of this Guan, including the types of *O. maccalli* and *O. plumbeiceps*. We were at first inclined to allow the latter (established by Mr. Gray upon Guatemalan specimens) to be distinct, from its smaller size and from the fulvous colouring of the terminations of the rectrices. In northern and central Mexican specimens, including the type of *O.*

* Next to this species must be inserted a new one, of which a single skin has lately come into our possession:—

ORTALIDA RUFICRISSA, sp. nov.

Fuscescenti-olivacea, capite plumbeo: subtus dilutior, ventre medio cineresciente; crisso dilute rufo: cauda cæneo-viridi, rectricibus quinque lateralibus albo late terminatis: long. tota 21·0, alæ 7·7, caudæ 9·0, tarsi 2·5.

Hab. Valle Dupar, on south side of the Sierra Nevada of S. Martha, at an elevation of 400 feet (*Joad*).

Mus. S.-G.

Obs. Similis *O. vetulæ*, sed crisso rufo et rectricum apicibus latius albis distinguenda.

Mr. Joad, F.Z.S., obtained two examples of this *Ortalitya* in December 1863, during his expedition in the vicinity of S. Martha. Only one skin was preserved, which is now in the collection of Salvin and Godman.

maccalli, the ends of the tail-feathers are pure white; but in some skins from Vera Cruz they are quite as fulvous as in Guatemalan examples. Again, a skin from Yucatan, obtained by Dr. A. Schott in 1865, is in our opinion quite undistinguishable from the type of *O. maccalli*, so that it is not possible to draw a geographical line between the two forms. There is also a certain amount of variation in the ventral plumage in this species, some, particularly those from Vera Cruz, being strongly tinged with rufous.

Under these circumstances we are compelled to regard *O. vetula* as a widely extended and somewhat variable species, ranging from the Rio Grande on the north over the whole Atlantic slope of Central America as far as Honduras on the south. On the Pacific slope it is supplanted by the following species.

14. ORTALIDA LEUCOGASTRA.

Penelope albiventer, Less. 1842, p. 174; Gould, Voy. Sulph. Zool. p. 48, t. 31.

Penelope leucogaster, Gould, P. Z. S. 1843, p. 105.

Ortalida leucogaster, G. R. Gray, List of Gallinæ, p. 13; Sel. et Salv. Ibis, 1859, p. 224; Sel. P. Z. S. 1859, p. 391.

Chamæpetes leucogastra, Reich. Tauben, p. 142.

Penelopsis leucogastra, Bp. C. R. xlii. p. 877 (1856).

Branzina-olivacea, pilea obscuriare; capitis lateribus et corpore subtus ad medium pectus plumbeis: abdomine toto pure albo: cauda æneo-viridi, rectricibus lateralibus alba terminatis: long. tota 16·5, alæ 7·3, caudæ 8, tarsi 2·5.

Hab. Realejo, Nicaragua (*Lesson*); Pacific slope of Guatemala (*Salvin*).

This Guan entirely replaces *O. vetula* on the Pacific slope of Central America, where, however, so far as we know, its range is confined between the frontier of Mexico on the north, and Realejo in Nicaragua on the south. Throughout the Costa Grande of Guatemala *Salvin* found it very abundant on the mountain-slopes from an elevation of about 3000 feet to the shores of the Pacific Ocean.

The pure white of the underparts of this species renders it easily distinguishable from its neighbouring ally *O. vetula*, though in habits no difference was noted. The eggs are white, with the surface somewhat roughened, as in other members of this family.

15. ORTALIDA GARRULA.

Phasianus garrulus, Humb. Obs. de Zool. i. p. 4.

Penelope garrula, Wagl. Isis, 1830, p. 1111.

Ortalida garrula, Wagl. Isis, 1832, p. 1227; G. R. Gray, List of Gall. p. 12.

Cinereascenti-ænea, pileo rufa: subtus valde dilutior, abdomine toto albo: remigibus externis castaneis: cauda obscure ænea, rectricibus quatuor extimis alba terminatis: long. tota 21, alæ 8·5, caudæ 9·5, tarsi 2·8.

Hab. Coast-region of New Granada, Magdalena valley (*Hum-*

boldt); Cartagena (*Barrot in Mus. Brit.*); Sta. Martha (*Verreaux in Mus. Brit.*).

Mus. Brit., Paris., Berol.

16. ORTALIDA CINEREICEPS.

Ortalida poliocephala, Scl. et Salv. P. Z. S. 1864, p. 371; Lawr. Ann. Lyc. N. Y. vii. p. 333, et ix. p. 139; Salv. P. Z. S. 1867, p. 161; v. Frantzius, Journ. f. O. 1869, p. 332.

Ortalida cinereiceps, G. R. Gray, List of Gall. p. 12; Salvin, Ibis, 1869, p. 318, et P. Z. S. 1870, p. 217.

Ortalida frantzii, Cab. Journ. f. O. 1869, p. 211.

Fuscescenti-anea, pileo cinereo: subtus valde dilutior, abdomine cineracescenti-albo: remigibus externis castaneis: cauda obscure anea, rectricibus lateralibus pallido cervino terminatis: long. tota 17, alæ 8, caudæ 8·7, tarsi 2·5.

Hab. Costa Rica (*Carmirol et v. Frantzius*); Veragua (*Arcé*); Panama (*M'Cleannan*).

Mus. Brit., Berol., Smiths., S.-G.

Obs. Præcedenti affinis, sed pileo cinereo nec rufescente distinguenda.

17. ORTALIDA ERYTHROPTERA.

Ortalida ruficeps, Sclater, P. Z. S. 1860, p. 289.

"*Ortalida erythroptera*, Natt.," *Mus. Berol.*; Licht. Nomencl. p. 87 (descr. nulla).

Æneo-viridis, capite undique cum gula summa, remigibus primariis et crisso castaneis: subtus cervina, pectore brunnescente, hypochondriis rufescentibus: cauda æneo-viridi, rectricum quatuor utrinque extimarum apicibus latius castaneis: long. tota 21, alæ 8, caudæ 10, tarsi 2·5.

Hab. in rep. Æquatoriali occidentali: Babahoyo (*Fraser*); Guyaquil (*Mus. Par.*).

Mus. Berol., Paris., et S.-G.

Mr. Fraser obtained four skins of this fine *Ortalida* at Babahoyo in 1859; but Sclater incorrectly referred it to *O. ruficeps* of Wagler, with which he was not then acquainted.

We were preparing to give it a new name, when Sclater found a specimen of the same bird in the Berlin Museum with a MS. name of Natterer's attached to it. Lichtenstein has given "Cumana" as the locality of this example; but Sclater ascertained on inquiry that the specimen in question had been received alive in one of the Royal Gardens, and had died in captivity, so that the locality assigned to it is not reliable.

In the Paris Museum there are two skins of this Guan obtained at Guyaquil by the expedition of the 'Danaïde' in 1843.

Subfam. III. OREOPHASINÆ.

Genus OREOPHASIS.

Type.

Oreophasis, G. R. Gray, Gen. of Birds, iii. p. 485 (1844). *O. derbianus*.

OREOPHISIS DERBIANUS.

Oreophasis derbianus, G. R. Gray, Gen. of B. iii. p. 485, pl. 121; Reichenb. Tauben, p. 155; Scl. et Salv. Ibis, 1859, p. 224; Salv. Ibis, 1860, pp. 43, 248.

Penelope fronticornis, Van der Hoev. Naturg. der Wirbelth. ii. p. 435.

Supra niger chalybeo-nitens: caudæ mediæ fascia lata alba: subtus albus, nigro anguste striatus: gula et ventre imo cum lateribus et tibiis nigris: rostro flavo: cornu verticali et pedibus rubris: long. tota 36, alæ 16, caudæ 15, tarsi 3·5.

Fem. *Mari similis, sed paulo minor, et cornu verticali minore.*

Hab. Guatemala, woods of the Volcan de Fuego, alt. 10,000 feet (*Salvin*).

Mus. Brit., Vindob., S.-G.

Sect. IV. *Geographical Distribution of the Cracidæ.*

The *Cracidæ* are strictly confined to the forests of the New World, and extend from the Rio Grande of Texas on the north to the wood-region of Paraguay on the south. They do not occur in the Antilles, with the exception of Trinidad and Tobago, and on the western side of the Andes do not pass southward of the Gulf of Guayaquil. Throughout the whole of this vast area the species are thinly distributed, not more than one member of the leading divisions (*Crax*, *Penelope*, and *Ortallida*) being usually found in the same locality. This fact of distribution is more strictly true than would appear from a cursory examination of the subjoined table. For instance, in Guatemala we find recorded the existence of two species of *Ortallida*. But one of these inhabits the western forests, and one the eastern; they are never found together. The same is, we believe, the case with the three Mexican *Ortallidæ*; and this fact is still more noticeable in the case of the true *Craces*, where each species appears to be confined to its own isolated area.

In the following table, which has been drawn up to show the distribution of the *Cracidæ*, we have divided the whole area occupied by the family into nine districts. We shall say a few words about each of them.

1. Mexico and Central America, from the Rio Grande of Texas down to the Isthmus of Panama.

In the whole of America north of Panama we find but one species of *Crax* occurring, viz. *C. globicera*. Of *Penelope* there are two species, *P. cristata* replacing *P. purpurascens* of Mexico and Guatemala in Costa Rica and Panama. The isolated *Penelopina nigra* is only met with in the elevated forests of Guatemala. In the same way *Chamæpetes unicolor* is peculiar to Costa Rica and Veragua. Five species of *Ortallida* are found northwards of Panama; but, as we have already explained, only one species occurs in each particular district. Lastly, the *Oreophasis* offers one of the most extraordinary instances of limited geographical distribution hitherto known, being absolutely restricted to the forest surrounding a single volcano.

Of the eleven Central-American species of *Cracidæ*, only one (*Penelope cristata*) is also met with south of Panama.

2. New Granada, *i. e.* the forests bordering the Magdalena river and its confluent and the northern littoral of the republic.

Of the *Cracidæ* of this district we have, probably, yet more to learn; but it is certainly rich in this as in other forms of tropical forest-life. The only *Crax* we have yet seen from the interior is *Crax alberti*. Bogotá collections also occasionally contain specimens of *Stegnotæma montagnii*, *Penelope cristata*, and *P. argyrotis*, *Pipile cumanensis*, *Aburria carunculata*, *Chamæpetes goudoti*, and *Ortalitya guttata*. *Penelope greyci* and *Ortalitya garrula* are, as far as we know, restricted to the lower portion of the valley of the Magdalena*.

3. Forest-region of Western Ecuador.

From Western Ecuador we as yet know of only two species of *Cracidæ*—*Chamæpetes goudoti* and *Ortalitya erythroptera*. It is quite evident that more remain to be discovered.

4. Northern littoral forests of Venezuela, Trinidad, and Tobago.

Crax daubentoni appears to represent its genus in the littoral wood-region of Venezuela, whence we have also seen specimens of three other species of *Cracidæ*, viz. *Penelope argyrotis*, *Pipile cumanensis*, and *Ortalitya ruficauda*. *Pipile cumanensis* also occurs in Trinidad; and as *Ortalitya ruficauda* is found in Tobago, it doubtless also inhabits the intervening island.

5. Guiana.

Guiana and the adjacent portion of the Amazonian basin as far as the Rio Negro is prolific in *Cracidæ*. The *Crax* is *C. alector*. *Nothocrax urumutum* is found on the islands of the Rio Negro. The two species of *Mitua* are both recorded by Schomburgk as found in British Guiana; and Natterer obtained *M. tomentosa* on the Rio Branco. *Pauxi galeata* is a denizen of the forests of the Rio Casiquiari and Upper Orinoco. *Penelope marail* is the only species of the genus *Penelope* of the occurrence of which in this district we have certain evidence; and *Ortalitya motmot* is likewise the single representative of its kind in this part of the world. *Pipile cumanensis* is also found in British Guiana.

6. Lower Amazonia up to Rio Madeira.

The mysterious *Crax pinima* is the only representative of its genus hitherto recorded from near Pará. *Mitua tuberosa* was found by Natterer in the same district. *Penelope pileata* is the only Lower-Amazonian species of *Penelope* of which we can speak with certainty. *Pipile cujubi* and *Ortalitya araucuan* in like manner are the sole representatives of their respective genera in this district. Altogether there are certainly five species of *Cracidæ* inhabiting Lower Amazonia, and one (*P. jacupeba*) is uncertain.

7. Upper Amazonia, embracing the eastern slopes of New Granada, Ecuador, Peru, and Bolivia.

In Upper Amazonia the recorded number of *Cracidæ* is larger, embracing no less than eight species. *Crax globulosa* is the *Crax*

* To these must be now added *Pauxi galeata* (vide antea, p. 520) and *Ortalitya ruficrissa* (vide antea, p. 538).

	I. Central America.	II. New Granada.	III. Western Ecuador.	IV. Venezuela.	V. Guiana.	VI. Lower Amazonia.	VII. Upper Amazonia.	VIII. S.E. Brazil.	IX. Paraguay.	Locality uncertain.
I. CRACINÆ.										
1. <i>Crax globicera</i>	*									
2. — <i>alector</i> .....	..	..	..	..	*	
3. — <i>sclateri</i> .....	..	..	..	..	..	..
4. — <i>globulosa</i> .....	..	..	..	..	..	..	..		*
5. — <i>daubentoni</i> .....	..	..	..	*	..	..	*
6. — <i>carunculata</i> .....	..	..	..	..	..	..	..	*
7. — <i>alberti</i> .....	..	*	..	..	..	..	..
8. — <i>pinima</i> .....	..	..	..	..	..	*	..
9. <i>Nothocrax urumutum</i> .....	..	..	..	..	*	..	*
10. <i>Pauxi galeata</i> .....	..	*	..	..	*	..	..
11. <i>Mitua tuberosa</i> .....	..	..	..	..	*	*	*
12. — <i>tomentosa</i> .....	..	..	..	..	*	..	..
II. PENELOPINÆ.										
13. <i>Steganolæma montagnii</i> .....	..	*	..	..	..	..	..
14. <i>Penelope purpurascens</i> .....	*	..	..	..	..	..	..
15. — <i>marail</i> .....	..	..	..	..	*	..	..
16. — <i>greeyi</i> .....	..	*	..	..	..	..	..
17. — <i>jacucaca</i> .....	..	..	..	..	..	..	..
18. — <i>jacupeba</i> .....	..	..	..	..	..	..	..	*
19. — <i>obscura</i> .....	..	..	..	..	..	..	..	..	*
20. — <i>cristata</i> .....	*	*	..	..	..	..	..	..
21. — <i>boliviana</i> .....	..	..	..	..	..	..	*
22. — <i>sclateri</i> .....	..	..	..	..	..	..	*
23. — <i>pileata</i> .....	..	..	..	..	..	*	..
24. — <i>ochrogaster</i> .....	..	..	..	..	..	..	..	..	*
25. — <i>superciliaris</i> .....	..	..	..	..	..	..	..	*
26. — <i>argyrotis</i> .....	..	*	..	*	..	..	..	..
27. <i>Penelopina nigra</i> .....	*	..	..	..	..	..	..	..
28. <i>Pipile cumanensis</i> .....	..	*	..	*	*	..	*		
29. — <i>jacutinga</i> .....	..	..	..	..	..	..	..	*
30. — <i>cujubi</i> .....	..	..	..	..	..	*	..	..
31. <i>Aburria carunculata</i> .....	..	*	..	..	..	..	..	..
32. <i>Chamæpetes goudoti</i> .....	..	*	*	..	..	..	*
33. — <i>unicolor</i> .....	*	..	..	..	..	..	..	..
34. <i>Ortalia motmot</i> .....	..	..	..	..	*	..	..	..
35. — <i>araucuan</i> .....	..	..	..	..	..	*	..	..
36. — <i>ruficeps</i> .....	..	..	..	..	..	..	..	..		*
37. — <i>wagleri</i> .....	*	..	..	..	..	..	..	..
38. — <i>ruficauda</i> .....	..	..	..	*	..	..	..	..
39. — <i>canicollis</i> .....	..	..	..	..	..	..	..	..	*
40. — <i>albiventris</i> .....	..	..	..	..	..	..	..	*
41. — <i>squamata</i> .....	..	..	..	..	..	..	..	*
42. — <i>caracco</i> .....	..	..	..	..	..	..	*	..
43. — <i>guttata</i> .....	..	*	..	..	..	..	*	..
44. — <i>superciliaris</i> .....	..	..	..	..	..	..	..	..		*
45. — <i>poliocephala</i> .....	*	..	..	..	..	..	..	..
46. — <i>vetula</i> .....	*	..	..	..	..	..	..	..
47. — <i>ruficrissa</i> .....	..	*	..	..	..	..	..	..
48. — <i>leucogastra</i> .....	*	..	..	..	..	..	..	..
49. — <i>garrula</i> .....	..	*	..	..	..	..	..	..
50. — <i>cinereiceps</i> .....	*	..	..	..	..	..	..	..
51. — <i>erythroptera</i> .....	..	..	*	..	..	..	..	..
III. OREOPHASINÆ.										
52. <i>Oreophasis derbianus</i> .....	*	..	..	..	..	..	..	..
	11	12	2	4	8	5	9	7	4	2

of the district; but two other *Cracinae* (*Nothocrax urumutum* and *Mitua tuberosa*) are likewise met with. The only *Penelope* we have seen from the Upper Amazon is *P. boliviana*; but *P. sclateri* is probably from the Bolivian branches of the same river. The widely spread *Pipile cumanensis* also occurs in more than one locality in this region. The *Ortaliidæ* are *O. guttata* and *O. caracco*.

8. Wood-region of South-east Brazil.

In this and the following district, which are closely connected, and, as we believe, altogether divided from the great Amazonian forest-region by intervening campos, we meet with an entirely new set of *Cracidæ*. In the wood-region of Brazil, which we are now considering, *Crax carunculata* is the sole representative of the *Cracinae*. Three species of *Penelope* occur—*P. jacucaca*, *P. jacupeba*, and *P. superciliaris*. *Pipile* is represented by *P. jacutinga*—very distinct from the two Amazonian species. Of *Ortaliida* two species, at least, are met with:—*O. albiventris*, in the vicinity of Bahia; and the nearly allied *O. squamata*, probably in one of the more southern provinces. Of *O. ruficeps*, attributed to this district, we do not know the exact locality.

9. Paraguay and adjoining wood-region of the interior of Brazil, situate on the Upper Paraguay and Parana.

In this district *Crax sclateri*, *Penelope obscura*, and *Ortaliida canicollis* represent their respective genera; but *Penelope ochrogaster*, discovered by Natterer near Cuyaba, probably also belongs to it.

June 23, 1870.

Professor Flower, F.R.S., V.P., in the Chair.

The following extract was read from a letter addressed to the Secretary by Dr. John Anderson, C.M.Z.S., dated Indian Museum, Calcutta, May 4th, 1870:—

“When I wrote to you about the Dolphin of the Irawady*, and mentioned *Globiocephalus*, I had not examined the specimen attentively, and had been misled by Blyth’s identification of two almost similar specimens in this museum. But on going into the subject I found that he had confounded two very distinct forms, and had regarded as the young of his *Globiocephalus indicus* a small full-grown Dolphin (the *Phocæna brevirostris* of Owen). I have written fully on this subject in my ‘Mammals of Yunan.’”

Mr. Howard Saunders, F.Z.S., exhibited and made remarks upon some nestlings of the Booted Eagle (*Aquila pennata*) from Southern Spain.

Dr. Murie read a memoir on the anatomy of the Walrus (*Tri-*

* See P. Z. S. *antè* p. 220.